Appendixes for Report
SAR_FCC_ISED_6200132_HB_SH2_rev2

DUT Information	
Manufacturer	Ascom Sweden AB
Brand Name	Myco 3
Model Name	SH2-ADAA
FCC ID	BXZSH2D
IC Number	3724B-SH2D
Type / Category	handset
Intended Use	☒ < 20 cm to human body (portable device) ☐ > 20 cm to human body (mobile/fixed device) ☐ - ☒ next to the ear ☒ body-worn ☐ limb-worn ☐ hand-held ☐ front-of-face ☐ body supported ☐ clothing-integrated
Prepared by	
Testing Laboratory	IMST GmbH, Test Center Carl-Friedrich-Gauß-Str. 2 – 4 47475 Kamp-Lintfort Germany
Prepared for	
Applicant / Manufacturer	Ascom Sweden AB Grimbodalen 2 SE-41749 Goteborg Sweden
Test Specification	
Applied Standard / Rule	IEEE 1528-2013; FCC CFR 47 § 2.1093; RSS-102 Issue 5
Exposure Category	☒ general public / uncontrolled exposure ☐ occupational / controlled exposure
Test Result	☒ PASS ☐ FAIL
Report Information	
Data Stored	6200132
Issue Date	February 21, 2020
Revision Date	July 29, 2020
Revision Number*	2 ***A new revision replaces all previous revisions and thus, become invalid herewith.**
Appendixes	Appendix A - Pictures Appendix B - SAR Distribution Plots Appendix C - System Verification Plots Appendix D – Certificates of Conformity Appendix E – Calibration Certificates for DAEs Appendix F – Calibration Certificates for E-Field Probes Appendix G – Calibration Certificates for Dipoles

Appendix A - Pictures

Pictures of the DUT

Pic.1: Front side views of the device under test.

Pic. 2: Rear side views of the device under test.

Pic. 3: View of the device with battery taken apart.

Pic. 4: Rear side views of the conducted DUT.

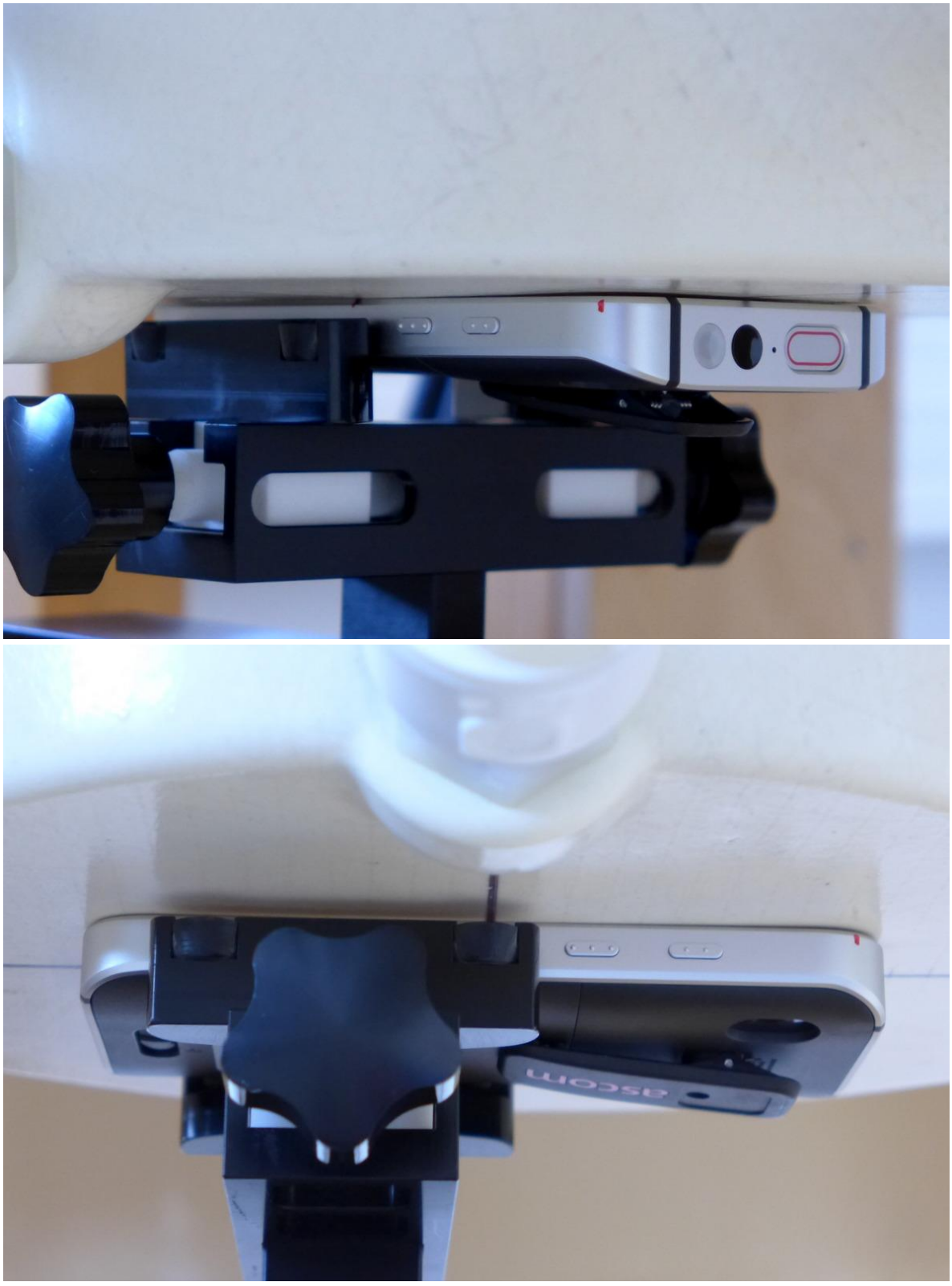
Pictures of Test Positions of the DUT

Pic. 5: Cheek position, left side.

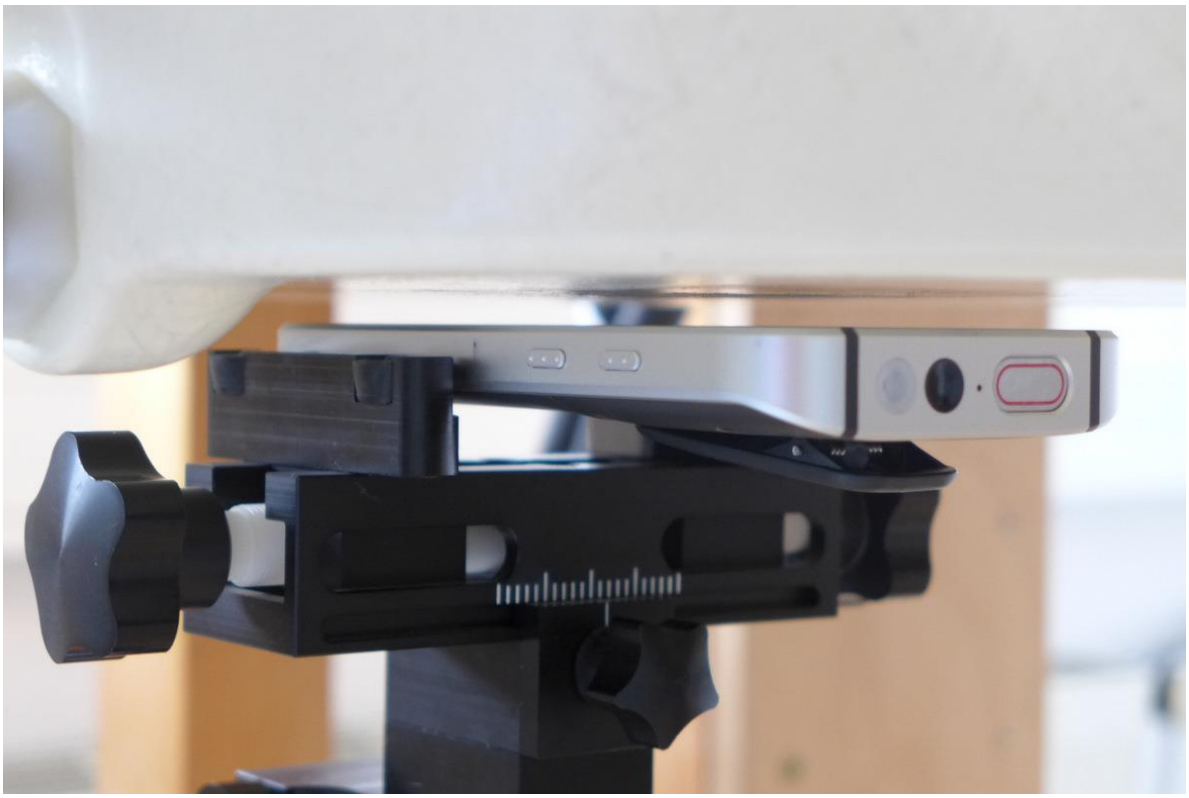
Pic. 6: Tilted position, left side.

Pic. 7: Cheek position, right side.

Pic. 8: Tilted position, right side.



Pic. 9: Test position front side of DUT towards the phantom, 0 mm gap, belt clip attached.



Pic. 10: Test position front side of DUT towards the phantom, 5 mm gap, belt clip attached.

Pic. 11: Test position rear side of DUT towards the phantom, 0 mm gap, belt clip attached.

Appendix B - SAR Distribution Plots

Worst Case SAR Measurement Plots for Head and Body Worn Configuration

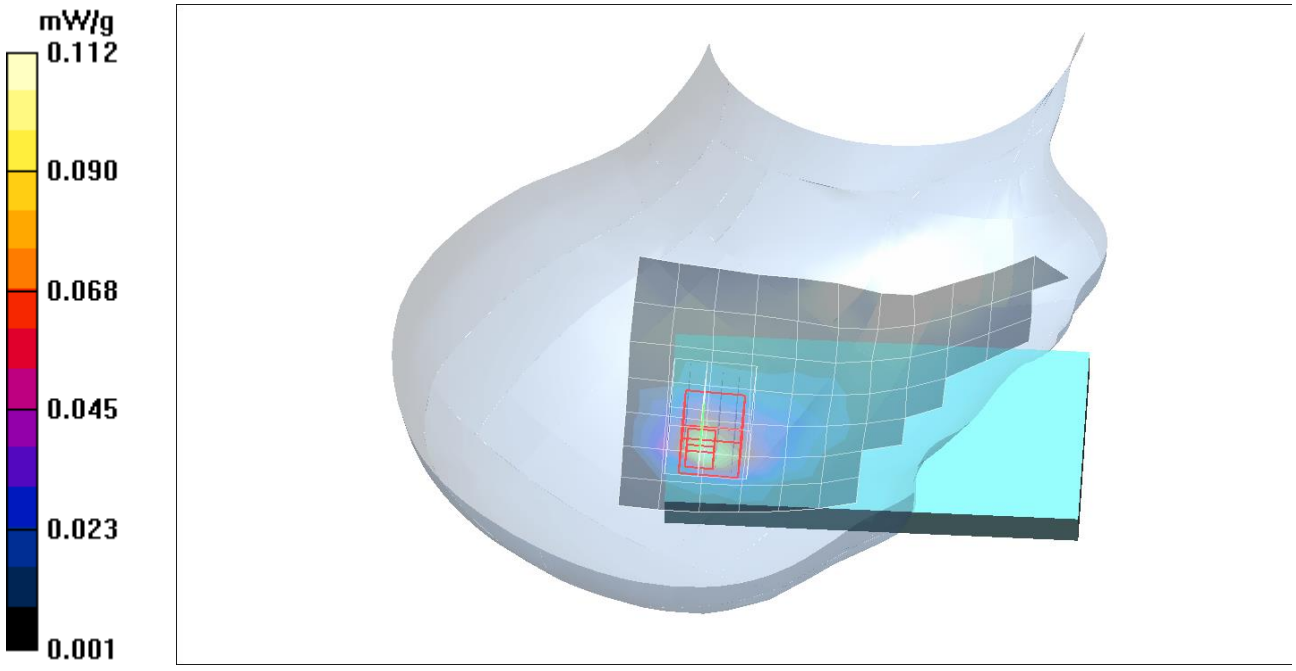
Test Laboratory: IMST GmbH, DASY Yellow (II); File Name:
SH2_ADAA_2Dy_dect_CH0_rm_1_clip_ant0.da4

DUT: ASCOM; Type: SH2-ADAA; Serial: SK00010044
Program Name: DECT US

Communication System: DECT US; Frequency: 1928.45 MHz;Duty Cycle: 1:24
Medium parameters used (interpolated): f = 1928.45 MHz; σ = 1.44 mho/m; ε_r = 38.7; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ET3DV6R - SN1669; ConvF(5.19, 5.19, 5.19); Calibrated: 2/26/2019
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 2/19/2019
- Phantom: SAM 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Right/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.111 mW/g
Cheek Right/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=6mm, dy=6mm, dz=5mm
Reference Value = 9.44 V/m; Power Drift = -0.019 dB
Peak SAR (extrapolated) = 0.176 W/kg
SAR(1 g) = 0.099 mW/g; SAR(10 g) = 0.053 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.112 mW/g



Plot. 1: SAR distribution plot for DECT, channel 0, antenna 0, head configuration, right cheek.

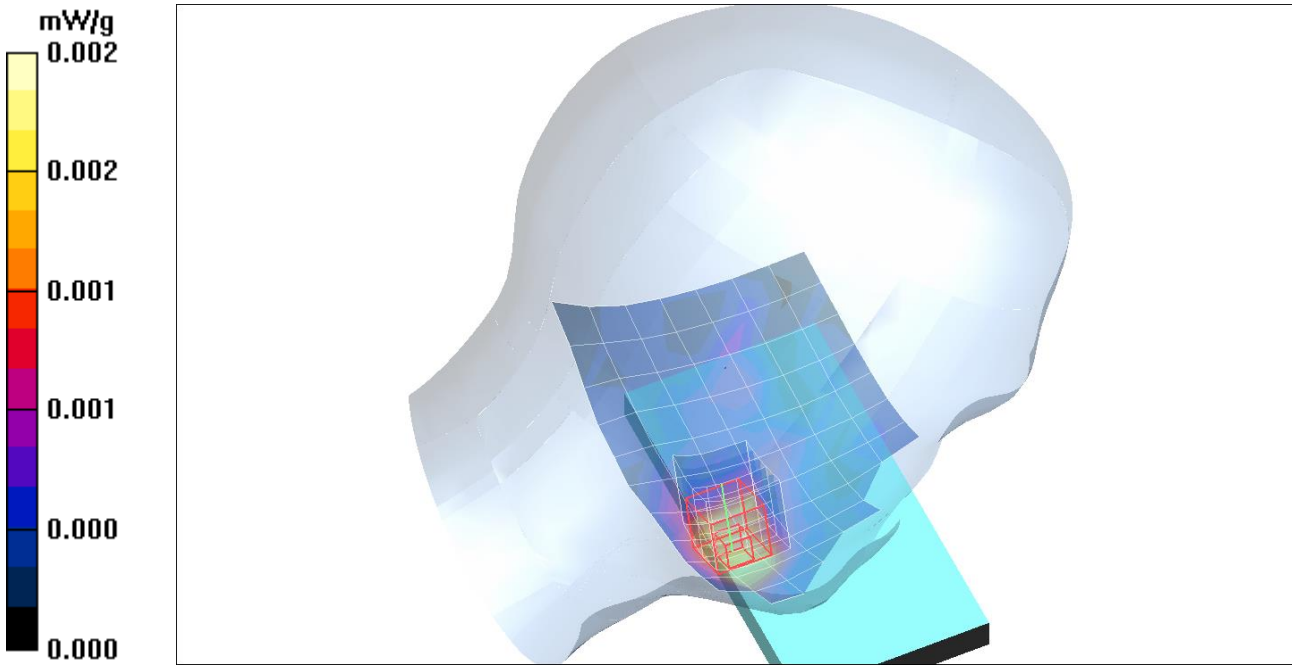
Test Laboratory: IMST GmbH, DASY Yellow (II); File Name:
SH2_ADAA_2Dy_dect_CH4_lm_1_clip_ant1.da4

DUT: ASCOM; Type: SH2-ADAA; Serial: SK00010044
Program Name: DECT US

Communication System: DECT US; Frequency: 1921.54 MHz;Duty Cycle: 1:24
Medium parameters used (interpolated): f = 1921.54 MHz; σ = 1.43 mho/m; ε_r = 38.7; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ET3DV6R - SN1669; ConvF(5.19, 5.19, 5.19); Calibrated: 2/26/2019
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 2/19/2019
- Phantom: SAM 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Left/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.002 mW/g
Cheek Left/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=6mm, dy=6mm, dz=5mm
Reference Value = 1.35 V/m; Power Drift = -0.166 dB
Peak SAR (extrapolated) = 0.003 W/kg
SAR(1 g) = 0.00199 mW/g; SAR(10 g) = 0.00132 mW/g
Info: Interpolated medium parameters used for SAR evaluation.



Plot. 2: SAR distribution plot for DECT, channel 4, antenna 1, head configuration, left cheek.

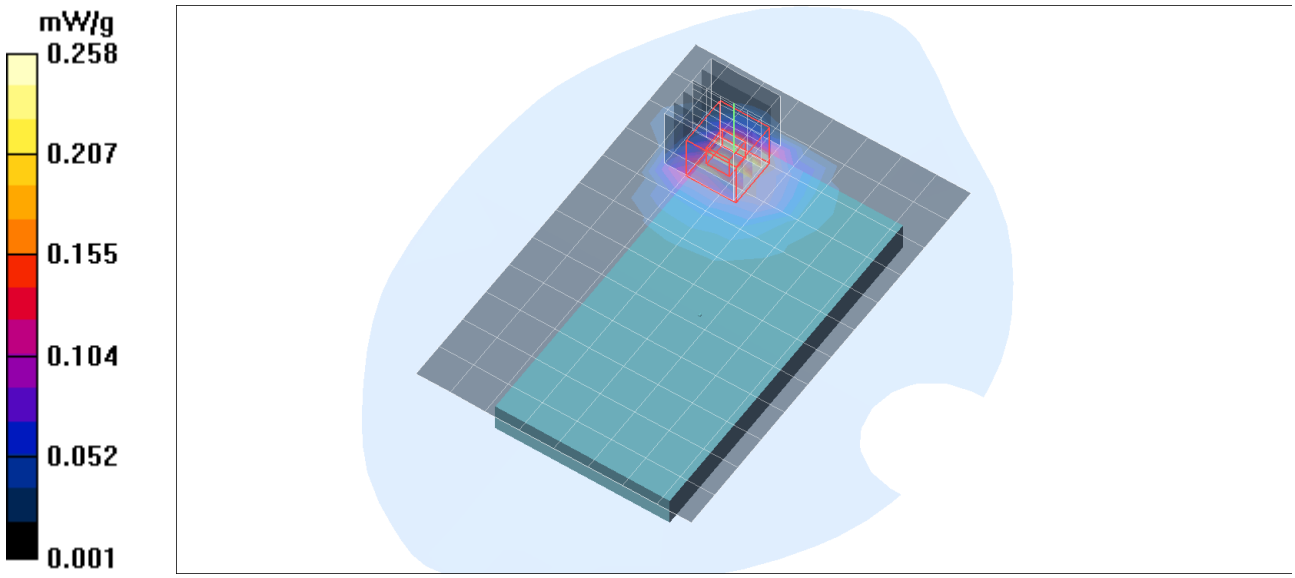
Test Laboratory: IMST GmbH, DASY Yellow (II); File Name:
SH2_ADAA_2Dy_dect_CH0_fh_front_clip_ant0_0mm.da4

DUT: ASCOM; Type: SH2-ADAA; Serial: SK00010044
Program Name: DECT US

Communication System: DECT US; Frequency: 1928.45 MHz;Duty Cycle: 1:24
Medium parameters used (interpolated): f = 1928.45 MHz; σ = 1.56 mho/m; ε_r = 52.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6R - SN1669; ConvF(4.7, 4.7, 4.7); Calibrated: 2/26/2019
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 2/19/2019
- Phantom: SAM 1341; Type: QD 000 P40 CB; Serial: TP-1341
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.179 mW/g
Body Worn/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=6mm, dy=6mm, dz=5mm
Reference Value = 13.1 V/m; Power Drift = 0.199 dB
Peak SAR (extrapolated) = 0.443 W/kg
SAR(1 g) = 0.237 mW/g; SAR(10 g) = 0.122 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.258 mW/g



Plot. 3: SAR distribution plot for DECT, channel 0, antenna 0, body configuration, front side, 0mm to phantom.

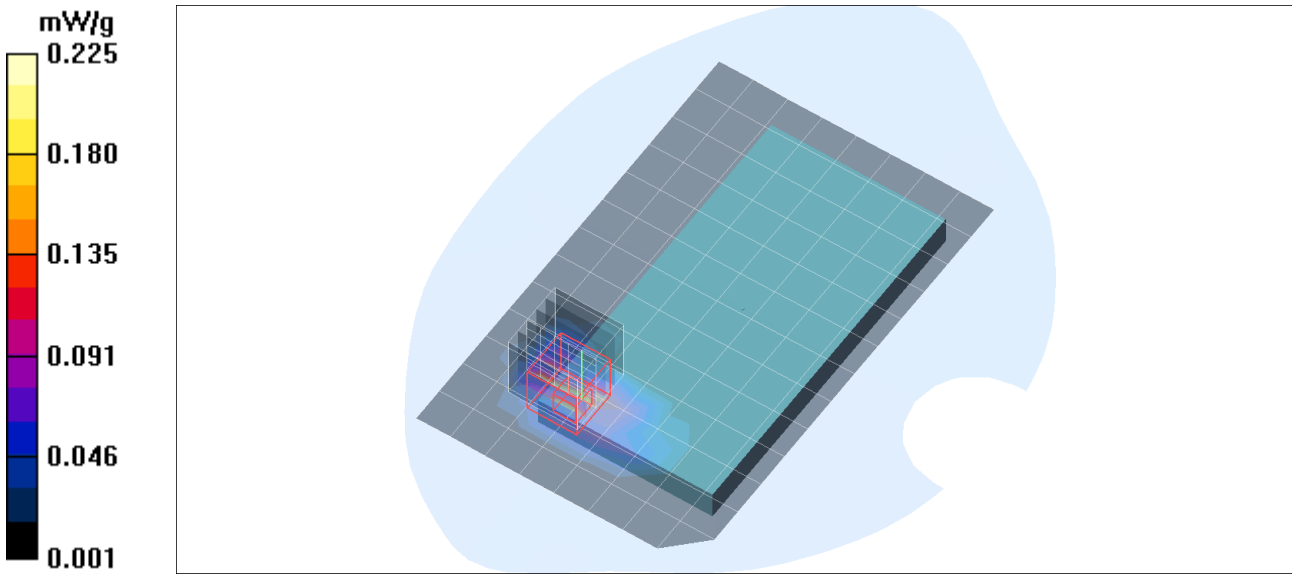
Test Laboratory: IMST GmbH, DASY Yellow (II); File Name:
SH2_ADAA_2Dy_dect_CH2_fm_front_clip_ant1_0mm.da4

DUT: ASCOM; Type: SH2-ADAA; Serial: SK00010044
Program Name: DECT US

Communication System: DECT US; Frequency: 1924.99 MHz;Duty Cycle: 1:24
Medium parameters used: f = 1925 MHz; σ = 1.55 mho/m; ε_r = 52.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6R - SN1669; ConvF(4.7, 4.7, 4.7); Calibrated: 2/26/2019
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 2/19/2019
- Phantom: SAM 1341; Type: QD 000 P40 CB; Serial: TP-1341
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.156 mW/g
Body Worn/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=6mm, dy=6mm, dz=5mm
Reference Value = 13.7 V/m; Power Drift = 0.039 dB
Peak SAR (extrapolated) = 0.433 W/kg
SAR(1 g) = 0.192 mW/g; SAR(10 g) = 0.078 mW/g
Maximum value of SAR (measured) = 0.225 mW/g



Plot. 4: SAR distribution plot for DECT, channel 0, antenna 0, body configuration, front side, 0mm to phantom.

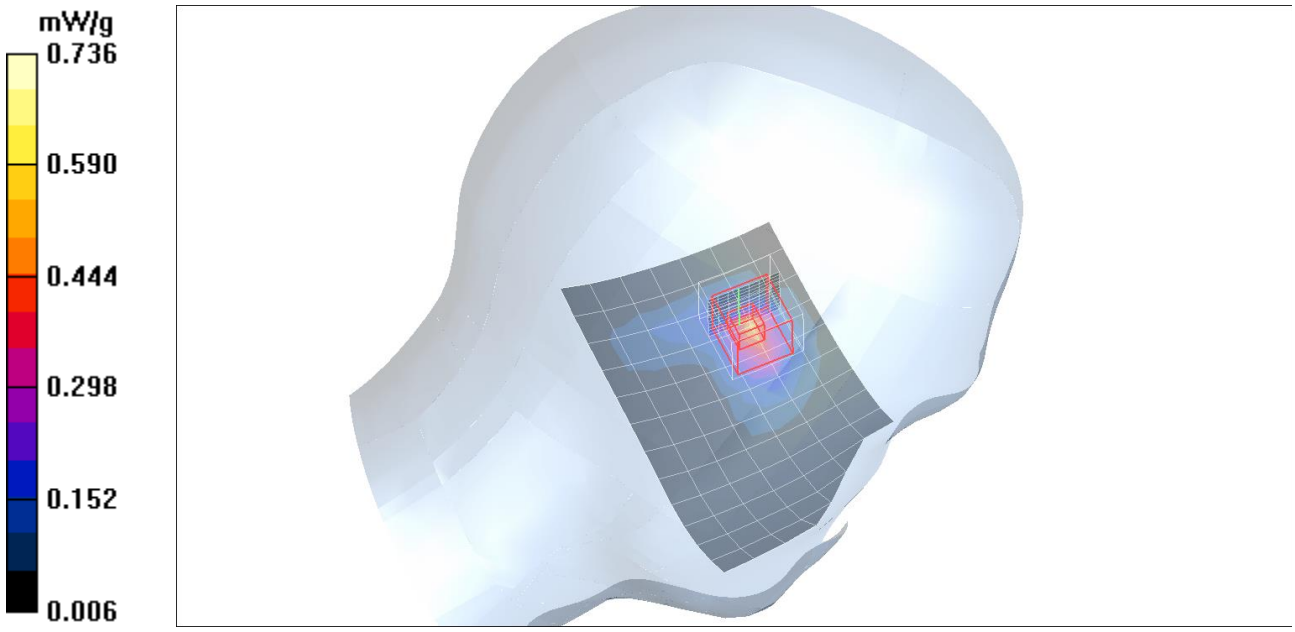
Test Laboratory: IMST GmbH, DASY Yellow (II); File Name: SH2_WLAN_PL19_CH1_b_l1.da4

DUT: ASCOM; Type: SH2-ADAA; Serial: SK00010044
Program Name: 2.4GHz b

Communication System: WLAN 2450; Frequency: 2412 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.84 mho/m; ε_r = 38.2; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3860; ConvF(7.72, 7.72, 7.72); Calibrated: 10/16/2019
- Sensor-Surface: 4mm (Mechanical Surface Detection)Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 10/10/2019
- Phantom: SAM 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Left/Area Scan (8x13x1): Measurement grid: dx=12mm, dy=12mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.527 mW/g
Cheek Left/Zoom Scan (8x8x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 8.91 V/m; Power Drift = 0.085 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.454 mW/g; SAR(10 g) = 0.198 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.736 mW/g



Plot. 5: SAR distribution plot for WLAN 2.4 GHz, channel 1, head configuration, left cheek.

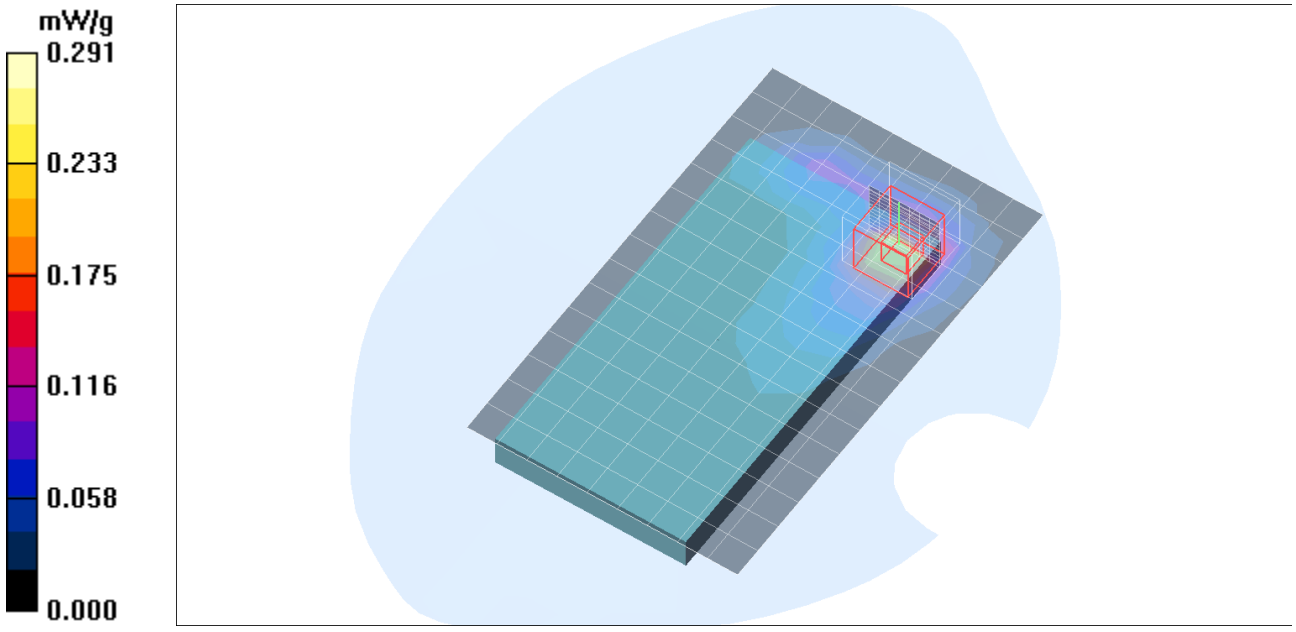
Test Laboratory: IMST GmbH, DASY Yellow (II); File Name: SH2_WLAN_PL19_CH6_b_front_5mm.da4

DUT: ASCOM; Type: SH2-ADAA; Serial: SK00010044
Program Name: 2.4GHz b

Communication System: WLAN 2450; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.86 mho/m; ε_r = 38.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3860; ConvF(7.72, 7.72, 7.72); Calibrated: 10/16/2019
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 10/10/2019
- Phantom: SAM 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Flat/Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.228 mW/g
Flat/Zoom Scan (8x8x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 7.78 V/m; Power Drift = -0.213 dB
Peak SAR (extrapolated) = 0.572 W/kg
SAR(1 g) = 0.257 mW/g; SAR(10 g) = 0.115 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.291 mW/g



Plot. 6: SAR distribution plot for WLan 2.4 GHz, channel 6, body configuration, front side, 5mm to phantom.

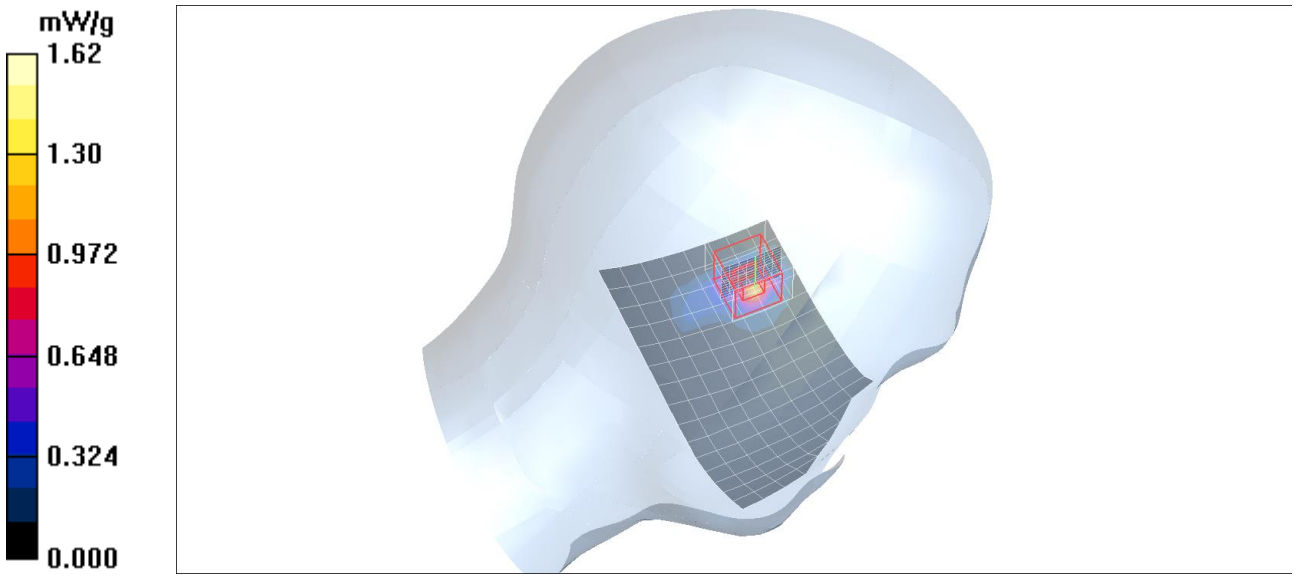
Test Laboratory: IMST GmbH, DASY Blue (I); File Name: SH2_WLAN_PL15.5_CH42_ac80_l1.da4

DUT: ASCOM; Type: SH2-ADAA; Serial: SK00010044
Program Name: 5GHz ac80

Communication System: 5 GHz ; Frequency: 5210 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5210 MHz; σ = 4.47 mho/m; ε_r = 36.7; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3860; ConvF(5.15, 5.15, 5.15); Calibrated: 10/16/2019
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 10/10/2019
- Phantom: SAM 1059; Type: Speag; Serial: 1059
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Left/Area Scan (9x16x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.26 mW/g
Cheek Left/Zoom Scan (8x8x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 9.49 V/m; Power Drift = 0.193 dB
Peak SAR (extrapolated) = 3.89 W/kg
SAR(1 g) = 0.800 mW/g; SAR(10 g) = 0.215 mW/g
Maximum value of SAR (measured) = 1.62 mW/g



Plot. 7: SAR distribution plot for WLAN 5 GHz, U-NII-1, channel 42, ac -VHT80, head configuration, left cheek.

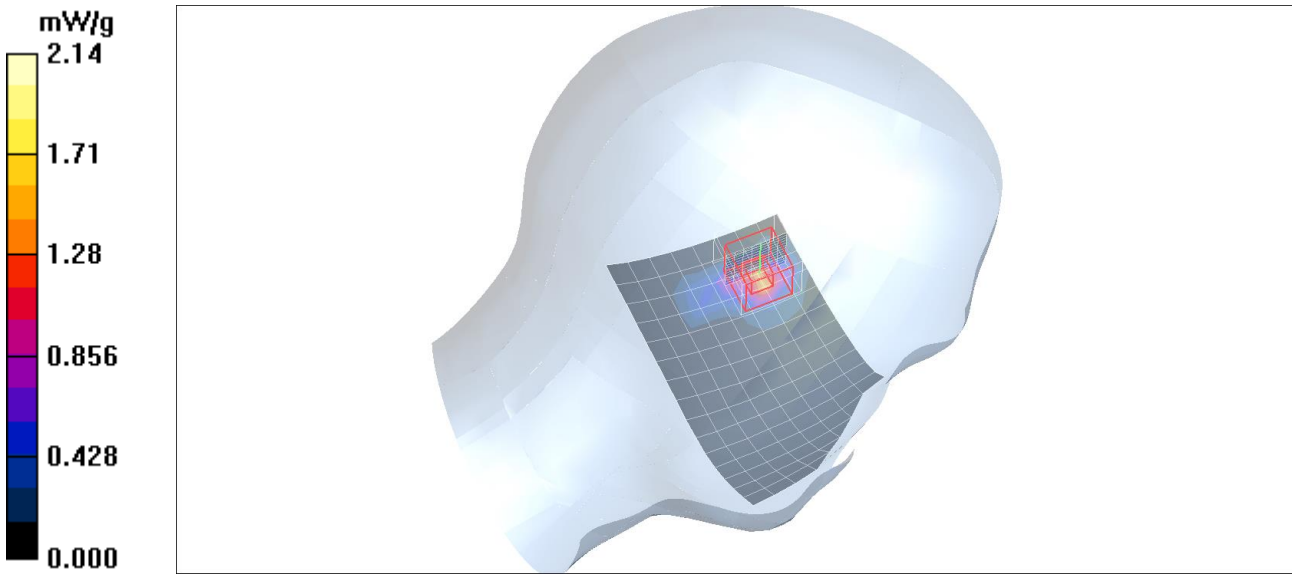
Test Laboratory: IMST GmbH, DASY Blue (I); File Name: SH2_WLAN_PL15.5_CH62_n40_l1.da4

DUT: ASCOM; Type: SH2-ADAA; Serial: SK00010044
Program Name: 5GHz n40

Communication System: 5 GHz ; Frequency: 5310 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5310 MHz; σ = 4.58 mho/m; ε_r = 36.4; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3860; ConvF(5.15, 5.15, 5.15); Calibrated: 10/16/2019
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 10/10/2019
- Phantom: SAM 1059; Type: Speag; Serial: 1059
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Left/Area Scan (9x16x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.54 mW/g
Cheek Left/Zoom Scan (8x8x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 12.0 V/m; Power Drift = -0.175 dB
Peak SAR (extrapolated) = 4.76 W/kg
SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.295 mW/g
Maximum value of SAR (measured) = 2.14 mW/g



Plot. 8: SAR distribution plot for WLAN 5 GHz, U-NII-2A, channel 62, n-HT40, head configuration, left cheek.

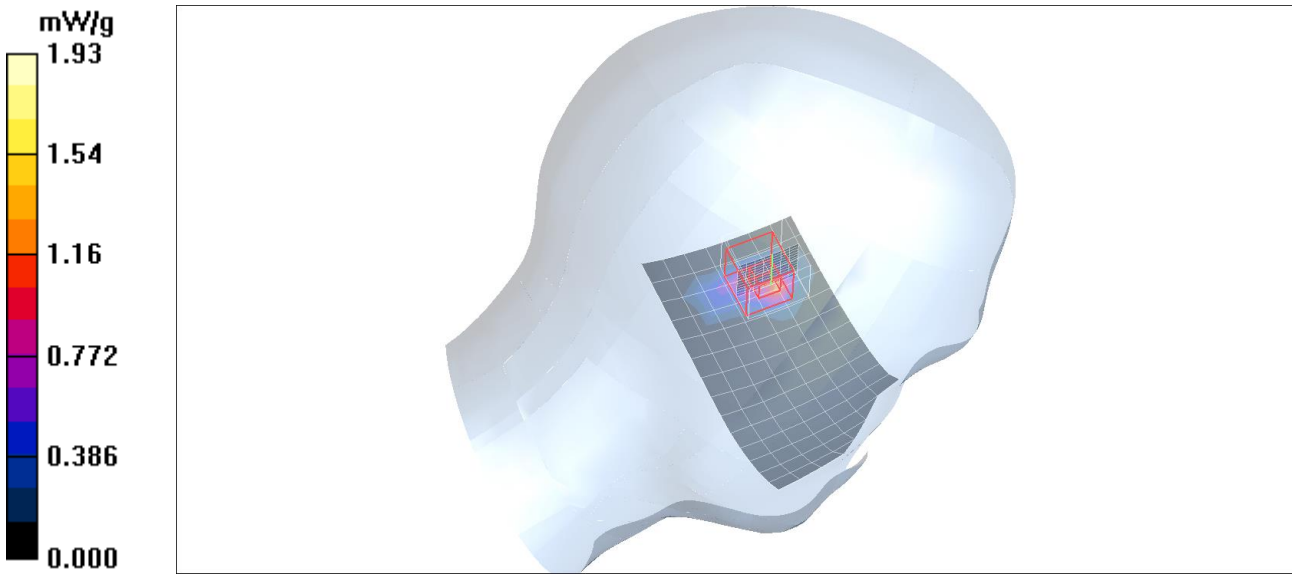
Test Laboratory: IMST GmbH, DASY Blue (I); File Name: SH2_WLAN_PL13.5_CH122_ac80_l2.da4

DUT: ASCOM; Type: SH2-ADAA; Serial: SK00010044
Program Name: 5GHz ac820

Communication System: 5 GHz ; Frequency: 5610 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5610 MHz; σ = 4.92 mho/m; ε_r = 35.8; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3860; ConvF(4.65, 4.65, 4.65); Calibrated: 10/16/2019
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 10/10/2019
- Phantom: SAM 1059; Type: Speag; Serial: 1059
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt Left/Area Scan (8x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.30 mW/g
Tilt Left/Zoom Scan (8x8x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 13.0 V/m; Power Drift = 0.138 dB
Peak SAR (extrapolated) = 4.75 W/kg
SAR(1 g) = 0.857 mW/g; SAR(10 g) = 0.237 mW/g
Maximum value of SAR (measured) = 1.93 mW/g



Plot. 9: SAR distribution plot for WLAN 5 GHz, U-NII-2C, channel 122, ac-VHT80, head configuration, left tilted.

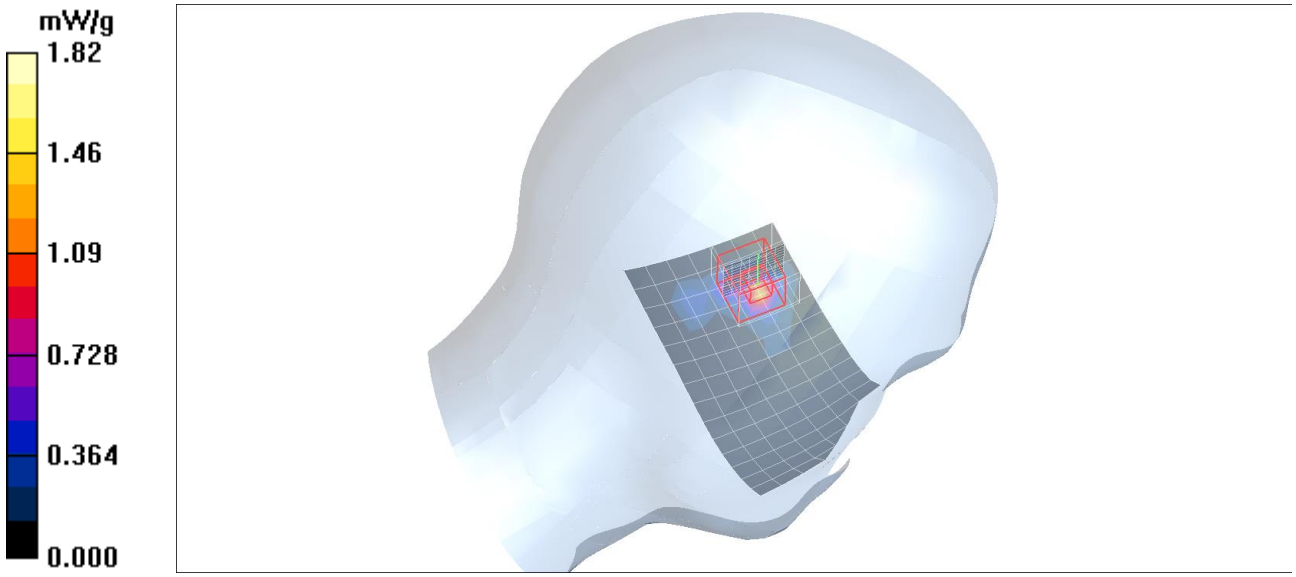
Test Laboratory: IMST GmbH, DASY Blue (I); File Name: SH2_WLAN_PL13.5_CH155_ac80_l1.da4

DUT: ASCOM; Type: SH2-ADAA; Serial: SK00010044
Program Name: 5GHz ac80

Communication System: 5 GHz ; Frequency: 5775 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5775 MHz; σ = 5.12 mho/m; ε_r = 35.3; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3860; ConvF(4.95, 4.95, 4.95); Calibrated: 10/16/2019
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 10/10/2019
- Phantom: SAM 1059; Type: Speag; Serial: 1059
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Left/Area Scan (8x15x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.40 mW/g
Cheek Left/Zoom Scan (8x8x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 12.6 V/m; Power Drift = 0.069 dB
Peak SAR (extrapolated) = 4.42 W/kg
SAR(1 g) = 0.784 mW/g; SAR(10 g) = 0.203 mW/g
Maximum value of SAR (measured) = 1.82 mW/g



Plot. 10: SAR distribution plot for WLAN 5 GHz, U-NIII-3, channel 155, ac-VHT80, head configuration, left cheek.

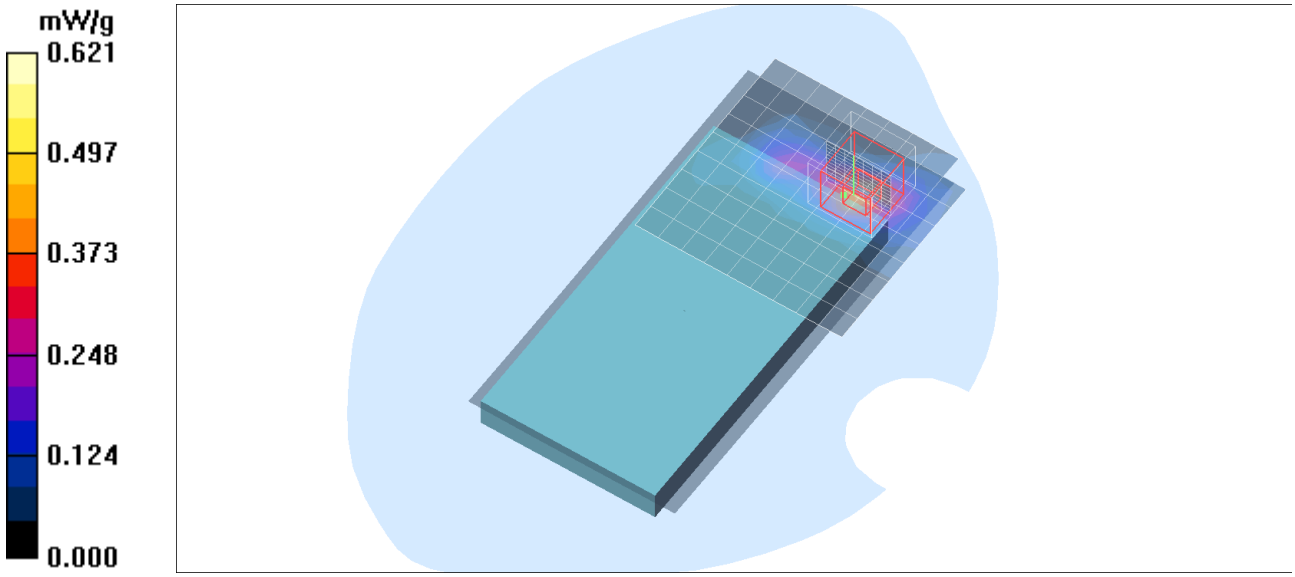
Test Laboratory: IMST GmbH, DASY Blue (I); File Name:
SH2_WLAN_PL15.5_CH58_ac80_front_5mm.da4

DUT: ASCOM; Type: SH2-ADAA; Serial: SK00010044
Program Name: 5GHz ac80

Communication System: 5 GHz ; Frequency: 5290 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5290 MHz; σ = 4.59 mho/m; ε_r = 36.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3860; ConvF(5.15, 5.15, 5.15); Calibrated: 10/16/2019
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 10/10/2019
- Phantom: SAM 1059; Type: Speag; Serial: 1059
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Flat/PreScan (31x61x1): Measurement grid: dx=30mm, dy=30mm
Maximum value of SAR (interpolated) = 0.369 mW/g
Flat/Area Scan (10x10x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.552 mW/g
Flat/Zoom Scan (8x8x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 11.0 V/m; Power Drift = -0.074 dB
Peak SAR (extrapolated) = 1.15 W/kg
SAR(1 g) = 0.312 mW/g; SAR(10 g) = 0.099 mW/g
Maximum value of SAR (measured) = 0.621 mW/g



Plot. 11: SAR distribution plot for WLan 5 GHz, U-NII-2A, channel 58, ac-VHT80, body configuration, front side, 5mm to phantom

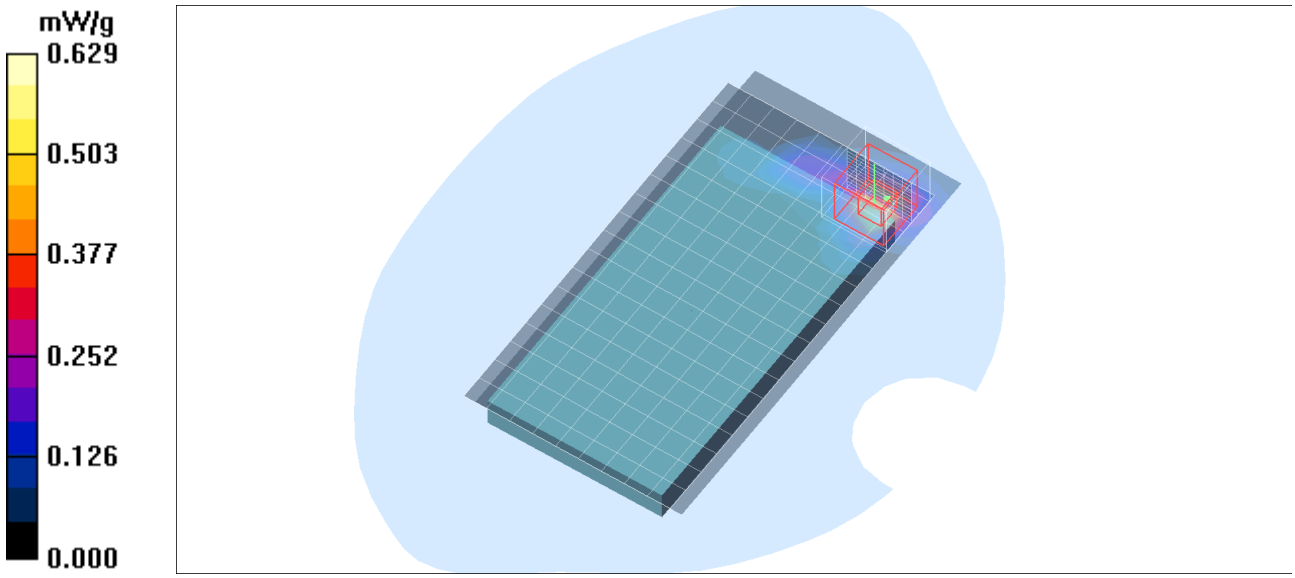
Test Laboratory: IMST GmbH, DASY Blue (I); File Name:
SH2_WLAN_PL13.5_CH122_ac80_front_5mm.da4

DUT: ASCOM; Type: SH2-ADAA; Serial: SK00010044
Program Name: 5GHz ac80

Communication System: 5 GHz ; Frequency: 5610 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5610 MHz; σ = 4.95 mho/m; ε_r = 35.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3860; ConvF(4.65, 4.65, 4.65); Calibrated: 10/16/2019
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 10/10/2019
- Phantom: SAM 1059; Type: Speag; Serial: 1059
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Flat/PreScan (31x61x1): Measurement grid: dx=30mm, dy=30mm
Maximum value of SAR (interpolated) = 0.275 mW/g
Flat/Area Scan (10x18x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.629 mW/g
Flat/Zoom Scan (8x8x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 11.9 V/m; Power Drift = -0.190 dB
Peak SAR (extrapolated) = 1.58 W/kg
SAR(1 g) = 0.365 mW/g; SAR(10 g) = 0.106 mW/g
Maximum value of SAR (measured) = 0.808 mW/g



Plot. 12: SAR distribution plot for WLan 5 GHz, U-NII-2C, channel 122, ac-VHT80, body configuration, front side, 5mm to phantom.

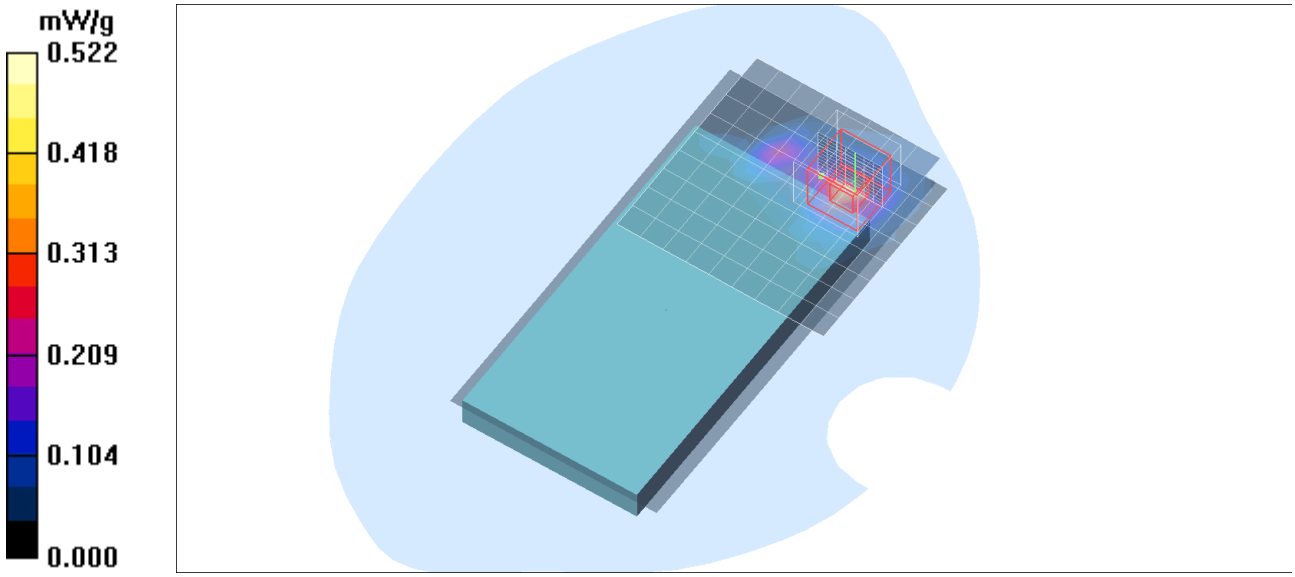
Test Laboratory: IMST GmbH, DASY Blue (I); File Name:
SH2_WLAN_PL13.5_CH155_ac80_front_5mm.da4

DUT: ASCOM; Type: SH2-ADAA; Serial: SK00010044
Program Name: 5GHz ac80

Communication System: 5 GHz ; Frequency: 5775 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5775 MHz; σ = 5.15 mho/m; ε_r = 35.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3860; ConvF(4.95, 4.95, 4.95); Calibrated: 10/16/2019
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 10/10/2019
- Phantom: SAM 1059; Type: Speag; Serial: 1059
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Flat/PreScan (31x61x1): Measurement grid: dx=30mm, dy=30mm
Maximum value of SAR (interpolated) = 0.254 mW/g
Flat/Area Scan (10x10x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.499 mW/g
Flat/Zoom Scan (8x8x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 6.94 V/m; Power Drift = -0.101 dB
Peak SAR (extrapolated) = 1.06 W/kg
SAR(1 g) = 0.246 mW/g; SAR(10 g) = 0.073 mW/g
Maximum value of SAR (measured) = 0.522 mW/g



Plot. 13: SAR distribution plot for WLan 5 GHz, U-NII-3, channel 155, ac-VHT80, body configuration, front side, 5mm to phantom.

Appendix C - System Verification Plots

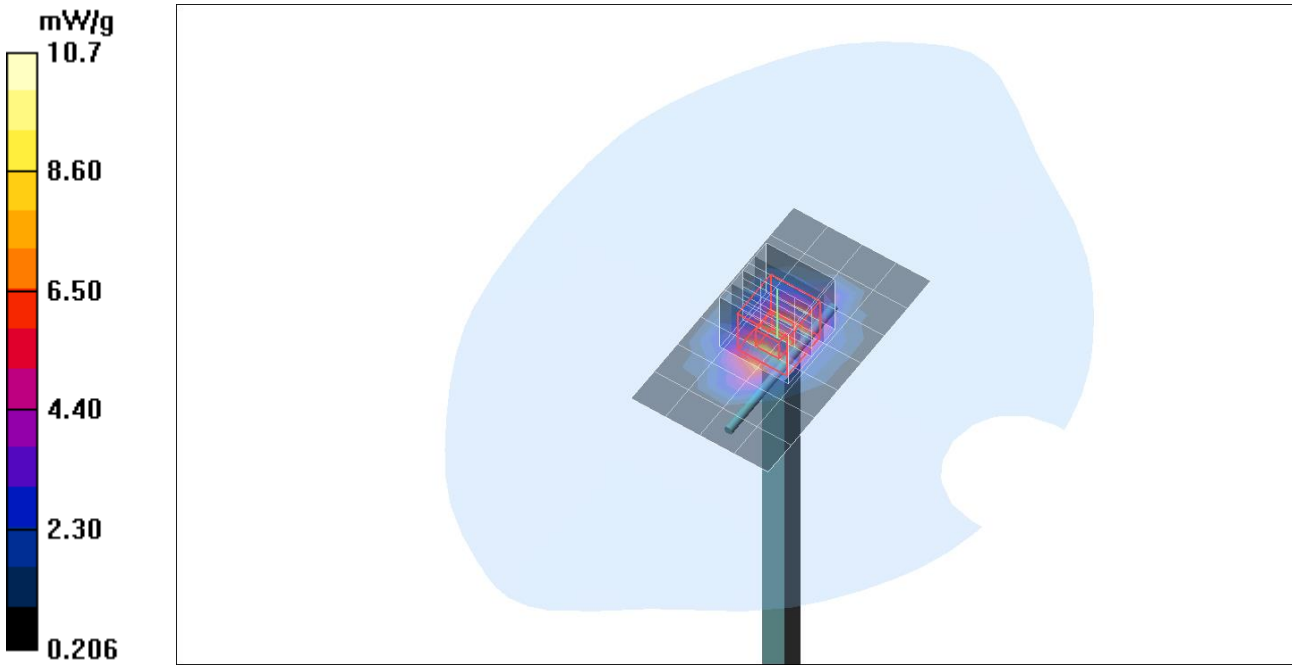
Test Laboratory: IMST GmbH, DASY Yellow (II); File Name: 20200130_1900h_2Dy_1669_335.da4

DUT: Dipole 1900 MHz SN: 535; Type: D1900V2; Serial: D1900V2 - SN535
Program Name: System Performance Check at 1900 MHz

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.41 mho/m; ε_r = 38.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6R - SN1669; ConvF(5.19, 5.19, 5.19); Calibrated: 2/26/2019
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 2/19/2019
- Phantom: SAM 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=250mW/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 9.88 mW/g
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 93.7 V/m; Power Drift = 0.004 dB
Peak SAR (extrapolated) = 15.1 W/kg
SAR(1 g) = 9.39 mW/g; SAR(10 g) = 5.04 mW/g
Maximum value of SAR (measured) = 10.7 mW/g



Plot. 14: SAR Verification Measurement 1900 MHz, Head (January 30, 2020).

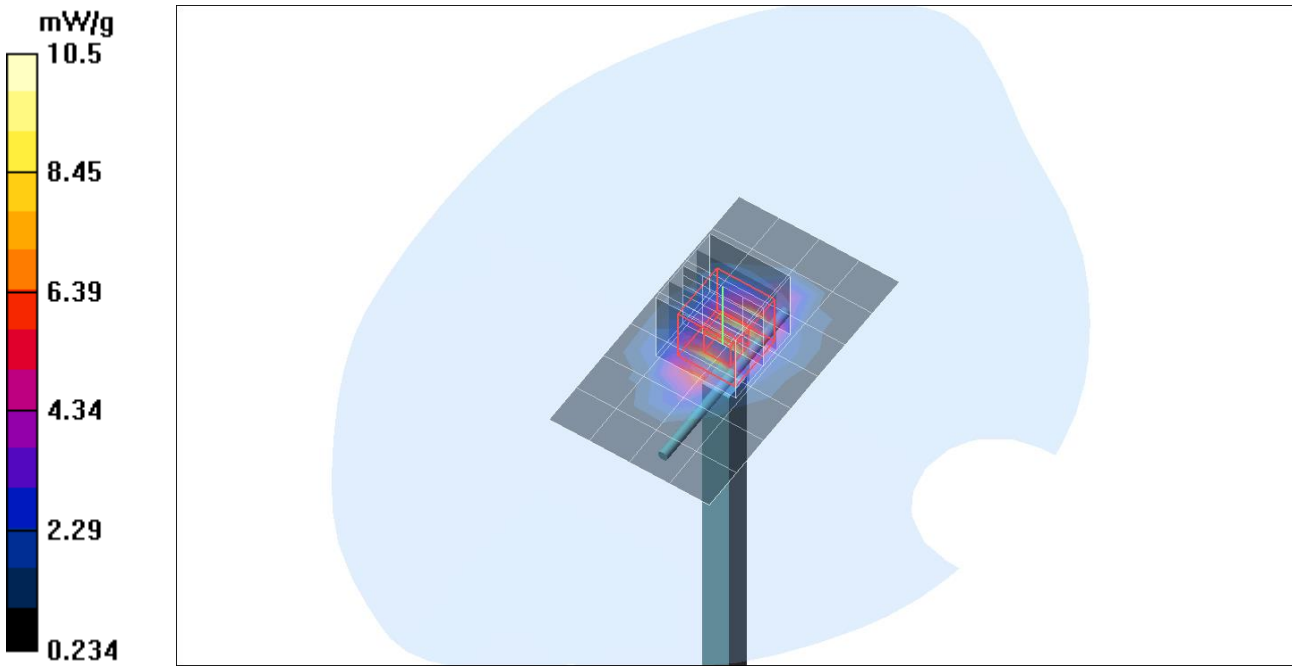
Test Laboratory: IMST GmbH, DASY Yellow (II); File Name: 20200212_2Dy_1900b_1669_335.da4

DUT: Dipole 1900 MHz SN: 535; Type: D1900V2; Serial: D1900V2 - SN535
Program Name: System Performance Check at 1900 MHz

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.53 mho/m; ε_r = 52.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6R - SN1669; ConvF(4.7, 4.7, 4.7); Calibrated: 2/26/2019
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 2/19/2019
- Phantom: SAM 1341; Type: QD 000 P40 CB; Serial: TP-1341
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=250mW/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 10.3 mW/g
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 88.0 V/m; Power Drift = 0.088 dB
Peak SAR (extrapolated) = 14.9 W/kg
SAR(1 g) = 9.25 mW/g; SAR(10 g) = 5 mW/g
Maximum value of SAR (measured) = 10.5 mW/g



Plot. 15: SAR Verification Measurement 1900 MHz, Body (February 12, 2020).

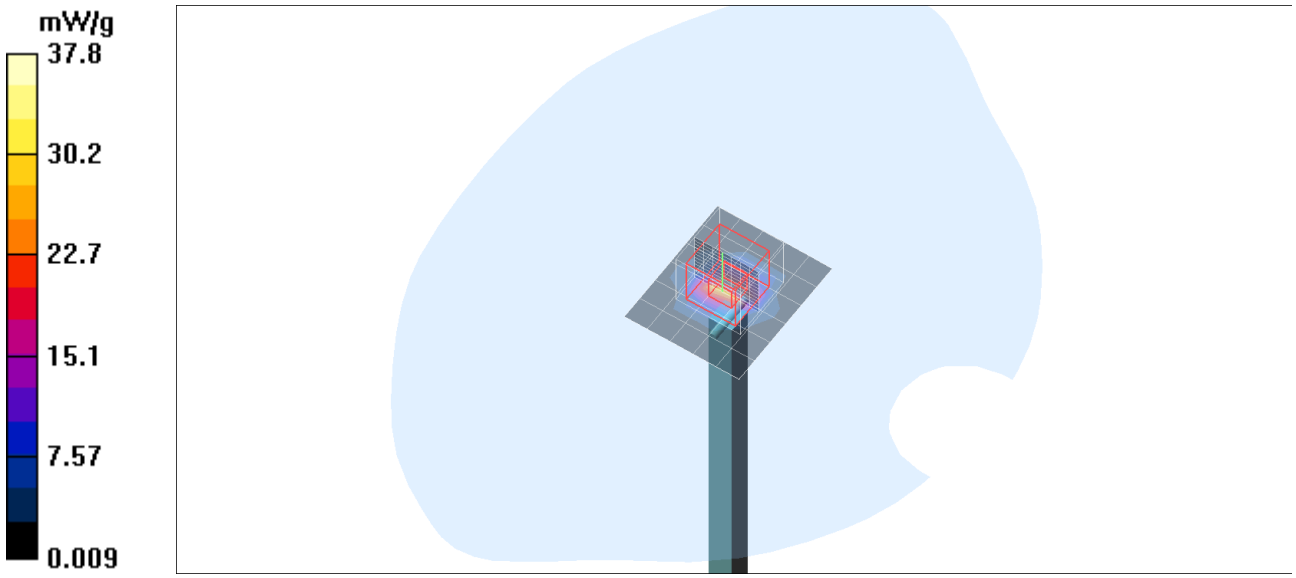
Test Laboratory: IMST GmbH, DASY Blue (I); File Name: 20200706_1Db_5250h_3860_631.da4

DUT: Dipole 5GHz SN: 1028; Type: D5GHzV2; Serial: D5GHzV2 - SN:1028
Program Name: System Performance Check at 5250 MHz

Communication System: CW; Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.67 mho/m; ε_r = 36.5; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3860; ConvF(5.15, 5.15, 5.15); Calibrated: 10/16/2019
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 10/10/2019
- Phantom: SAM 1059; Type: Speag; Serial: 1059
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=250mW/Area Scan (6x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 30.6 mW/g
d=10mm, Pin=250mW/Zoom Scan (8x8x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 99.2 V/m; Power Drift = -0.029 dB
Peak SAR (extrapolated) = 79.6 W/kg
SAR(1 g) = 19.6 mW/g; SAR(10 g) = 5.5 mW/g
Maximum value of SAR (measured) = 37.8 mW/g



Plot. 16: SAR Verification Measurement 5250 MHz, Head, (July 6, 2020).

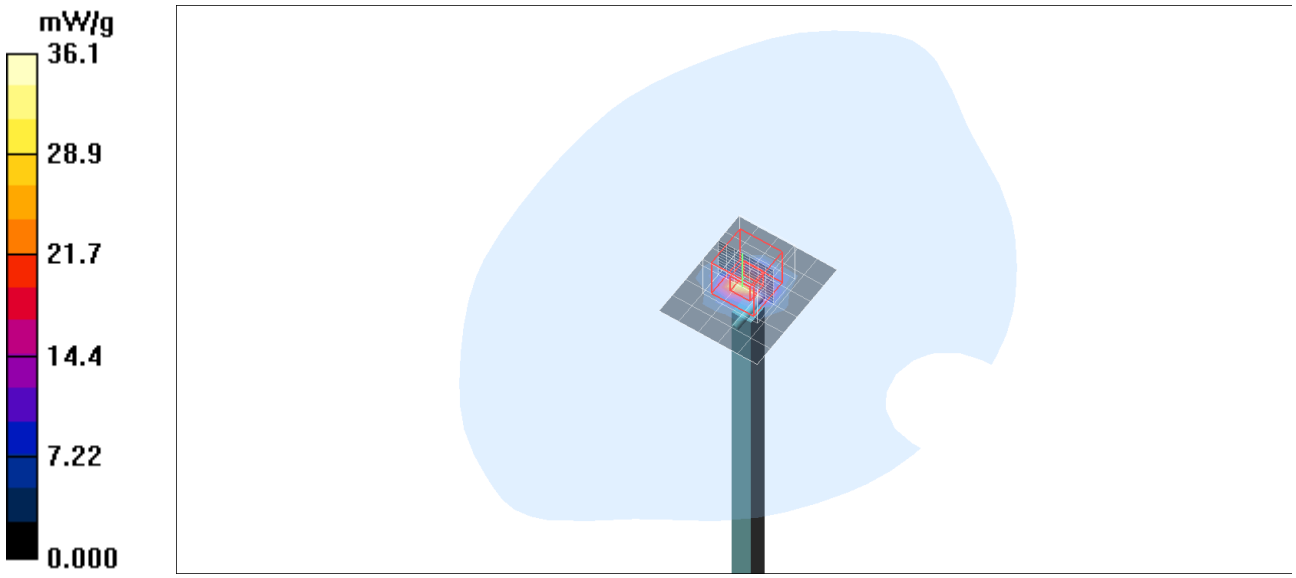
Test Laboratory: IMST GmbH, DASY Blue (I); File Name: 20200709_1Db_5250h_3860_631.da4

DUT: Dipole 5GHz SN: 1028; Type: D5GHzV2; Serial: D5GHzV2 - SN:1028
Program Name: System Performance Check at 5250 MHz

Communication System: CW; Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.51 mho/m; ε_r = 36.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3860; ConvF(5.15, 5.15, 5.15); Calibrated: 10/16/2019
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 10/10/2019
- Phantom: SAM 1059; Type: Speag; Serial: 1059
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=250mW/Area Scan (6x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 31.5 mW/g
d=10mm, Pin=250mW/Zoom Scan (8x8x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 95.5 V/m; Power Drift = 0.063 dB
Peak SAR (extrapolated) = 74.0 W/kg
SAR(1 g) = 18.2 mW/g; SAR(10 g) = 5.16 mW/g
Maximum value of SAR (measured) = 36.1 mW/g



Plot. 17: SAR Verification Measurement 5250 MHz, Head, (July 9, 2020).

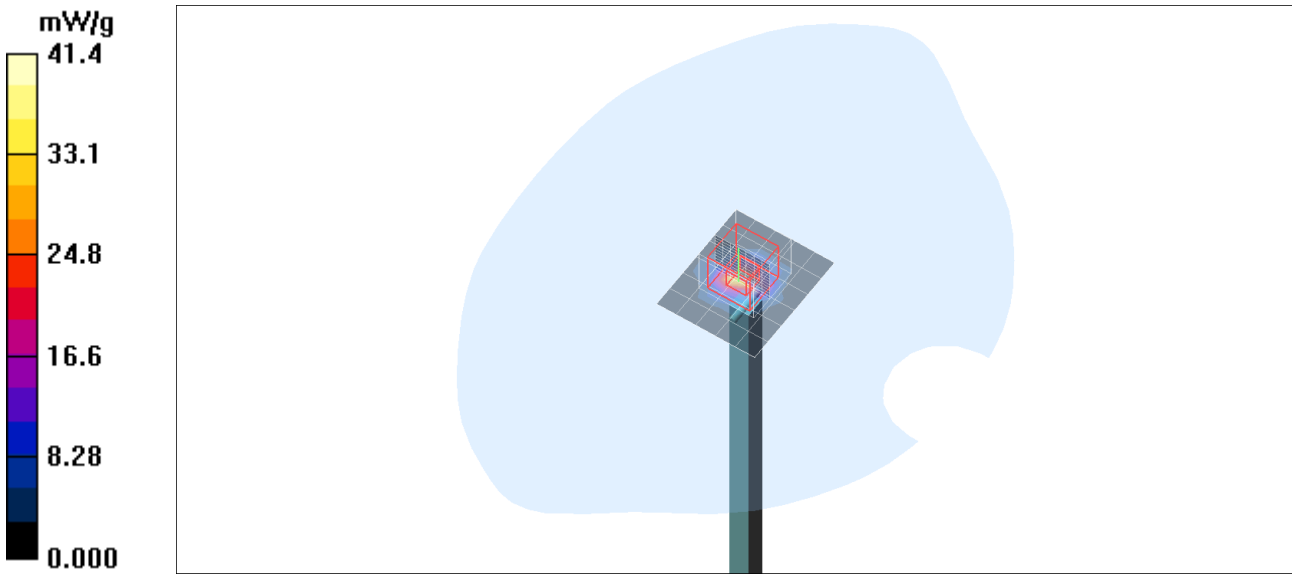
Test Laboratory: IMST GmbH, DASY Blue (I); File Name: 20200709_1Db_5600h_3860_631.da4

DUT: Dipole 5GHz SN: 1028; Type: D5GHzV2; Serial: D5GHzV2 - SN:1028
Program Name: System Performance Check at 5600 MHz

Communication System: CW; Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 4.91 mho/m; ε_r = 35.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3860; ConvF(4.65, 4.65, 4.65); Calibrated: 10/16/2019
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 10/10/2019
- Phantom: SAM 1059; Type: Speag; Serial: 1059
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=250mW/Area Scan (6x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 37.4 mW/g
d=10mm, Pin=250mW/Zoom Scan (8x8x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 98.8 V/m; Power Drift = 0.075 dB
Peak SAR (extrapolated) = 88.6 W/kg
SAR(1 g) = 20.4 mW/g; SAR(10 g) = 5.71 mW/g
Maximum value of SAR (measured) = 41.4 mW/g



Plot. 18: SAR Verification Measurement 5600 MHz, Head, (July 9, 2020).

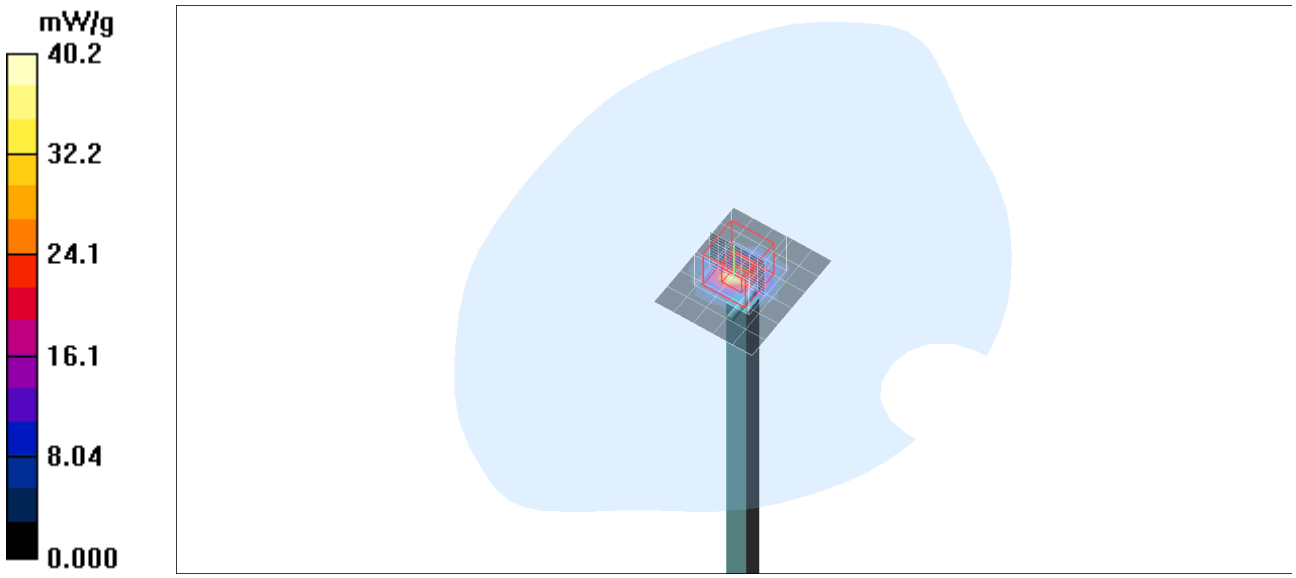
Test Laboratory: IMST GmbH, DASY Blue (I); File Name: 20200714_1Db_5600h_3860_631.da4

DUT: Dipole 5GHz SN: 1028; Type: D5GHzV2; Serial: D5GHzV2 - SN:1028
Program Name: System Performance Check at 5600 MHz

Communication System: CW; Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 4.93 mho/m; ε_r = 35.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3860; ConvF(4.65, 4.65, 4.65); Calibrated: 10/16/2019
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 10/10/2019
- Phantom: SAM 1059; Type: Speag; Serial: 1059
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=250mW/Area Scan (6x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 39.5 mW/g
d=10mm, Pin=250mW/Zoom Scan (8x8x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 95.0 V/m; Power Drift = 0.150 dB
Peak SAR (extrapolated) = 90.6 W/kg
SAR(1 g) = 20.4 mW/g; SAR(10 g) = 5.72 mW/g
Maximum value of SAR (measured) = 40.2 mW/g



Plot. 19: SAR Verification Measurement 5600 MHz, Head, (July 14, 2020).

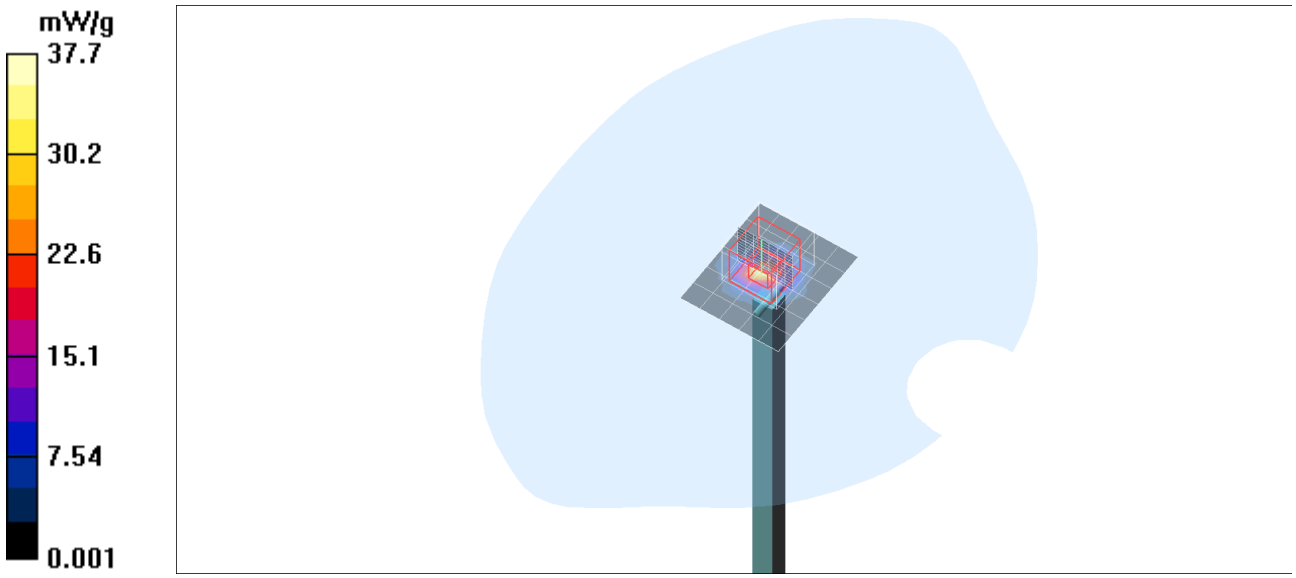
Test Laboratory: IMST GmbH, DASY Blue (I); File Name: 20200714_1Db_5800h_3860_631.da4

DUT: Dipole 5GHz SN: 1028; Type: D5GHzV2; Serial: D5GHzV2 - SN:1028
Program Name: System Performance Check at 5800 MHz

Communication System: CW; Frequency: 5800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5800 MHz; σ = 5.15 mho/m; ε_r = 35.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3860; ConvF(4.95, 4.95, 4.95); Calibrated: 10/16/2019
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 10/10/2019
- Phantom: SAM 1059; Type: Speag; Serial: 1059
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=250mW/Area Scan (6x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 35.5 mW/g
d=10mm, Pin=250mW/Zoom Scan (8x8x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 87.0 V/m; Power Drift = 0.145 dB
Peak SAR (extrapolated) = 83.5 W/kg
SAR(1 g) = 18.1 mW/g; SAR(10 g) = 5.08 mW/g
Maximum value of SAR (measured) = 37.7 mW/g



Plot. 20: SAR Verification Measurement 5800 MHz, Head, (July 14, 2020).

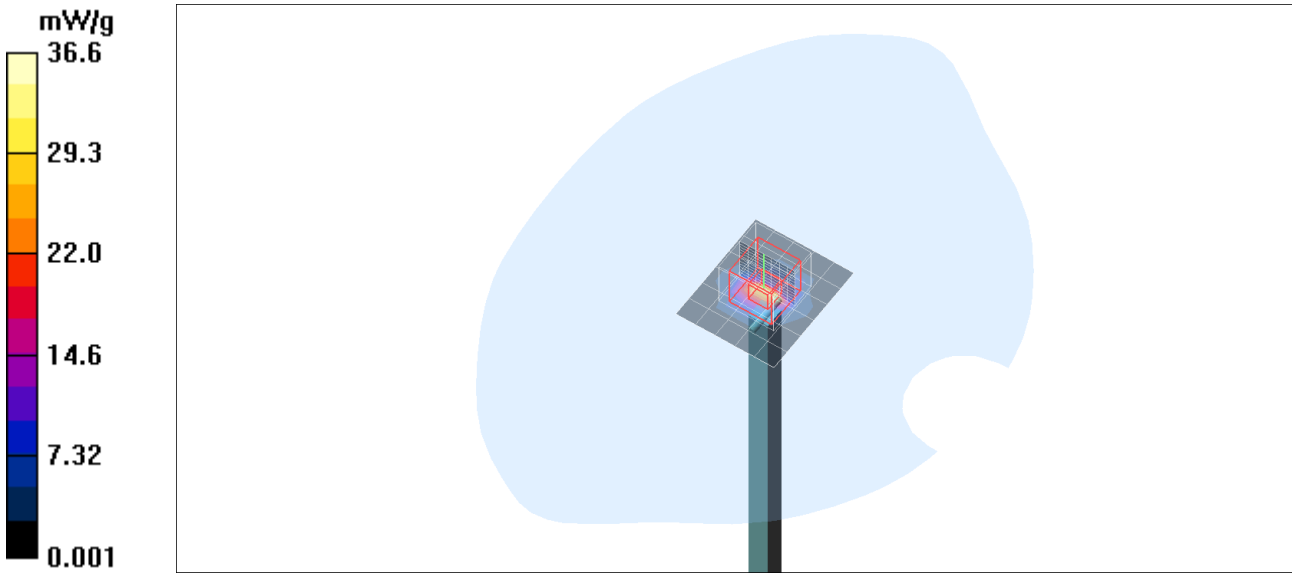
Test Laboratory: IMST GmbH, DASY Blue (I); File Name: 20200716_1Db_5250h_3860_631.da4

DUT: Dipole 5GHz SN: 1028; Type: D5GHzV2; Serial: D5GHzV2 - SN:1028
Program Name: System Performance Check at 5250 MHz

Communication System: CW; Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.54 mho/m; ε_r = 36.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3860; ConvF(5.15, 5.15, 5.15); Calibrated: 10/16/2019
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 10/10/2019
- Phantom: SAM 1059; Type: Speag; Serial: 1059
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=250mW/Area Scan (6x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 28.6 mW/g
d=10mm, Pin=250mW/Zoom Scan (8x8x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 101.1 V/m; Power Drift = -0.021 dB
Peak SAR (extrapolated) = 77.5 W/kg
SAR(1 g) = 19 mW/g; SAR(10 g) = 5.39 mW/g
Maximum value of SAR (measured) = 36.6 mW/g



Plot. 21: SAR Verification Measurement 5250 MHz, Head, (July 16, 2020).

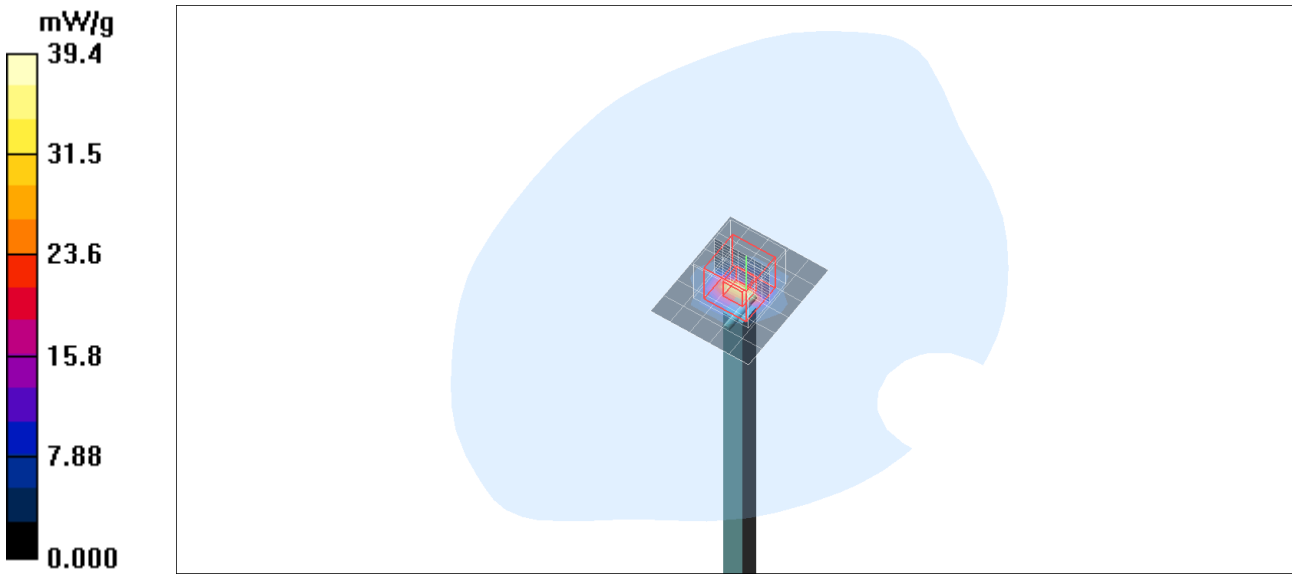
Test Laboratory: IMST GmbH, DASY Blue (I); File Name: 20200716_1Db_5600h_3860_631.da4

DUT: Dipole 5GHz SN: 1028; Type: D5GHzV2; Serial: D5GHzV2 - SN:1028
Program Name: System Performance Check at 5600 MHz

Communication System: CW; Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 4.94 mho/m; ε_r = 35.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3860; ConvF(4.65, 4.65, 4.65); Calibrated: 10/16/2019
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 10/10/2019
- Phantom: SAM 1059; Type: Speag; Serial: 1059
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=250mW/Area Scan (6x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 31.8 mW/g
d=10mm, Pin=250mW/Zoom Scan (8x8x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 101.6 V/m; Power Drift = -0.019 dB
Peak SAR (extrapolated) = 88.7 W/kg
SAR(1 g) = 20.5 mW/g; SAR(10 g) = 5.75 mW/g
Maximum value of SAR (measured) = 39.4 mW/g



Plot. 22: SAR Verification Measurement 5600 MHz, Head, (July 16, 2020).

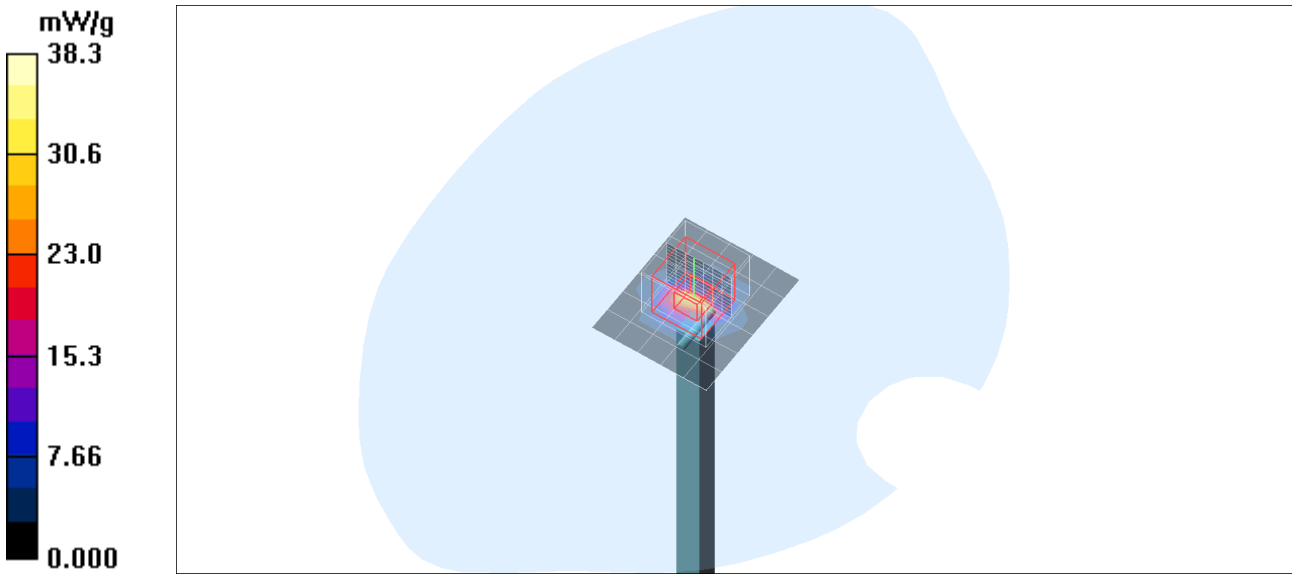
Test Laboratory: IMST GmbH, DASY Blue (I); File Name: 20200720_1Db_5250h_3860_631.da4

DUT: Dipole 5GHz SN: 1028; Type: D5GHzV2; Serial: D5GHzV2 - SN:1028
Program Name: System Performance Check at 5250 MHz

Communication System: CW; Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.64 mho/m; ε_r = 36.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3860; ConvF(5.15, 5.15, 5.15); Calibrated: 10/16/2019
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 10/10/2019
- Phantom: SAM 1059; Type: Speag; Serial: 1059
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=250mW/Area Scan (6x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 31.9 mW/g
d=10mm, Pin=250mW/Zoom Scan (8x8x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 99.8 V/m; Power Drift = -0.010 dB
Peak SAR (extrapolated) = 77.2 W/kg
SAR(1 g) = 19.5 mW/g; SAR(10 g) = 5.54 mW/g
Maximum value of SAR (measured) = 38.3 mW/g



Plot. 23: SAR Verification Measurement 5250 MHz, Head, (July 20, 2020).

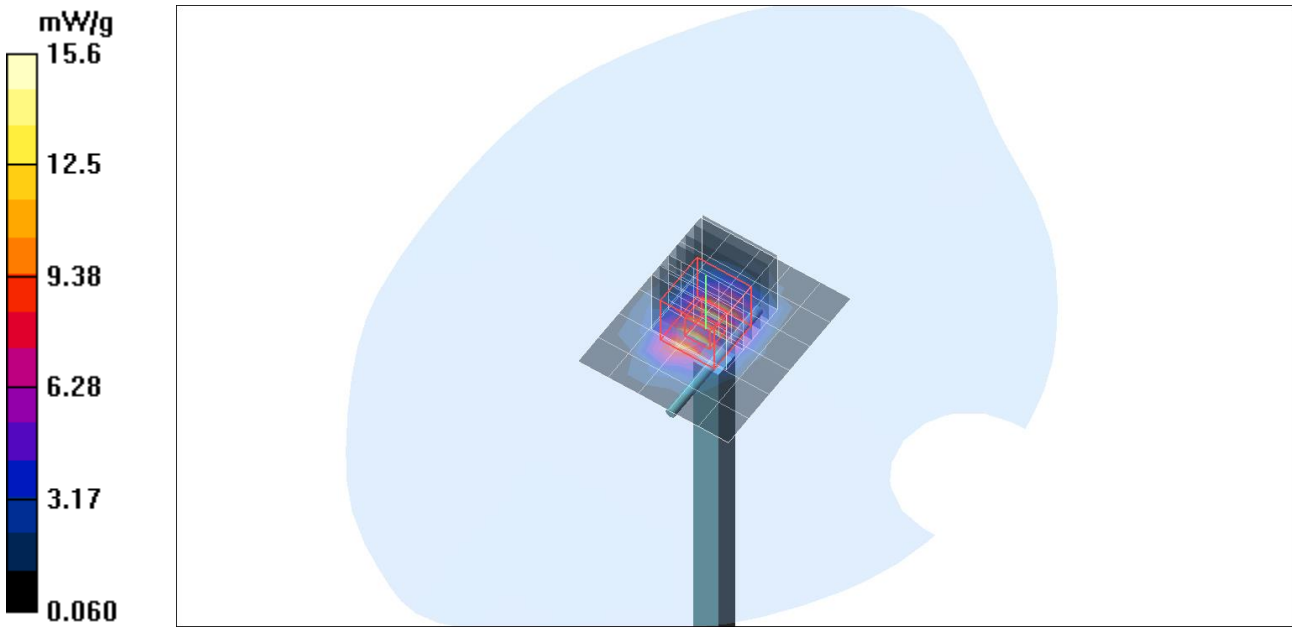
Test Laboratory: IMST GmbH, DASY Yellow (II); File Name: 20200721_1Dy_2450h_3860_631.da4

DUT: Dipole 2450 MHz SN: 709; Type: D2450V2; Serial: D2450V2 - SN:709
Program Name: System Performance Check at 2450 MHz

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.88 mho/m; ε_r = 38; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3860; ConvF(7.72, 7.72, 7.72); Calibrated: 10/16/2019
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 10/10/2019
- Phantom: SAM 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=250mW/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 14.8 mW/g
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 88.5 V/m; Power Drift = 0.148 dB
Peak SAR (extrapolated) = 29.0 W/kg
SAR(1 g) = 13.8 mW/g; SAR(10 g) = 6.35 mW/g
Maximum value of SAR (measured) = 15.6 mW/g



Plot. 24: SAR Verification Measurement 2450 MHz, Head, (July 21, 2020).

Appendix D – Certificates of Conformity

Schmid & Partner Engineering AG

s p e a g

Zeughausstrasse 43, 8004 Zurich, Switzerland
Phone +41 44 245 9700, Fax +41 44 245 9779
info@speag.com, http://www.speag.com

Certificate of conformity

Item	Dosimetric Assessment System DASY4
Type No	SD 000 401A, SD 000 402A
Software Version No	DASY 4.7
Manufacturer / Origin	Schmid & Partner Engineering AG Zeughausstrasse 43, CH-8004 Zürich, Switzerland

References

[1] IEEE 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
[2] IEC 62209 – 1, "Specific Absorption Rate (SAR) in the frequency range of 300 MHz to 3 GHz – Measurement Procedure, Part 1: Hand-held mobile wireless communication devices", February 2005
[3] IEC 62209 – 2, "Evaluation of Human Exposure to Radio Frequency Fields from Handheld and Body-Mounted Wireless Communication Devices in the Frequency Range of 30 MHz to 6 GHz: Human models, Instrumentation and Procedures, Part 2: Procedure to determine the Specific Absorption Rate (SAR) for ... including accessories and multiple transmitters", March 2010
[4] KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"
[5] ANSI-C63.19-2011, "American National Standard for Methods of Measurement of Compatibility between Wireless Communication Devices and Hearing Aids", May 2011

Conformity

We certify that this **system is designed to be fully compliant** with the standards [1 – 5] for RF emission tests of wireless devices.

Uncertainty

The uncertainty of the measurements with this system was evaluated according to the above standards and is documented in the applicable chapters of the DASY4 system handbook and in Chapter 27 of the DASY5 system handbook.
The uncertainty values represent current state of methodology and are subject to changes. They are applicable to all laboratories using DASY4 provided the following requirements are met (responsibility of the system end user):

1) the system is used by an experienced engineer who follows the manual and the guidelines taught during the training provided by SPEAG,
2) the probe and validation dipoles have been calibrated for the relevant frequency bands and media within the requested period,
3) the DAE has been calibrated within the requested period,
4) the "minimum distance" between probe sensor and inner phantom shell and the radiation source is selected properly,
5) the system performance check has been successful,
6) the operational mode of the DUT is CW, CDMA, FDMA or TDMA (GSM, DCS, PCS, IS136, PDC) and the measurement/integration time per point is ≥ 500 ms,
7) if applicable, the probe modulation factor is evaluated and applied according to field level, modulation and frequency,
8) the dielectric parameters of the liquid are conform with the standard requirement,
9) the DUT has been positioned as described in the manual.
10) the uncertainty values from the calibration certificates, and the laboratory and measurement equipment dependent uncertainties, are updated by end user accordingly.

s p e a g

Schmid & Partner Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland
Phone +41 44 245 9700, Fax +41 44 245 9779
info@speag.com, http://www.speag.com

Date 19.09.2016 **Signature / Stamp**

Doc No 880 – SD00040XA-Standards_1609 – G KP/FB Page 1 (1)

Fig. 9: Certificate of conformity for the used DASY4 system:

Schmid & Partner Engineering AG
s p e a g
Zeughausstrasse 43, 8004 Zurich, Switzerland
Phone +41 44 245 9700, Fax +41 44 245 9779
info@speag.com, http://www.speag.com

Certificate of Conformity / First Article Inspection

Item	SAM Twin Phantom V4.0 and V5.0
Type No	QD 000 P40 C
Series No	TP-1150 and higher
Manufacturer	Untersee Composites Knebelstrasse 8, CH-8268 Mannenbach, Switzerland

Tests
Complete tests were made on the pre-series QD 000 P40 A, # TP-1001, on the series first article QD 000 P40 B # TP-1006. Certain parameters are retested on series items.

Test	Requirement	Details	Units tested
Dimensions	Compliant with the geometry according to the CAD model.	IT'IS CAD File *	First article, Samples
Material thickness of shell	2mm +/- 0.2mm in flat section, other locations: +/- 0.2mm with respect to CAD file	in flat section, in the cheek area	First article, Samples, TP-1314 ff.
Material thickness at ERP	6mm +/- 0.2mm at ERP		First article, All items
Material parameters	rel. permittivity 2 – 5, loss tangent ≤ 0.05, at f ≤ 6 GHz	rel. permittivity 3.5 +/- 0.5 loss tangent ≤ 0.05	Material samples
Material resistivity	Compatibility with tissue simulating liquids .	Compatible with SPEAG liquids. **	Phantoms, Material sample
Sagging	Sagging of the flat section in tolerance when filled with tissue simulating liquid.	< 1% for filling height up to 155 mm	Prototypes, Sample testing

* The IT'IS CAD file is derived from [2] and is also within the tolerance requirements of the shapes of the other documents.
** Note: Compatibility restrictions apply certain liquid components mentioned in the standard, containing e.g. DGBE, DGMHE or Triton X-100. Observe technical note on material compatibility.

Standards
[1] OET Bulletin 65, Supplement C, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", Edition 01-01
[2] IEEE 1528-2003, "Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques, December 2003
[3] IEC 62209–1 ed1.0, "Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures - Part 1: Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", 2005-02-18
[4] IEC 62209–2 ed1.0, "Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures - Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", 2010-03-30

Conformity
Based on the sample tests above, we certify that this item is in compliance with the uncertainty requirements of **hand-held** SAR measurements and system performance checks as specified in [1 – 4] and further standards.

Date 25.07.2011

Signature / Stamp

s p e a g
Schmid & Partner Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerlan
Phone +41 44 245 9700, Fax +41 44 245 9779
http://www.speag.com

Doc No 881 – QD 000 P40 C – H Page 1 (1)

Fig. 10: Certificate of conformity for the used SAM phantom.

Schmid & Partner Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland
Phone +41 1 245 9700, Fax +41 1 245 9779
info@speag.com, http://www.speag.com

Certificate of Conformity / First Article Inspection

Item	Oval Flat Phantom ELI 4.0
Type No	QD OVA 001 B
Series No	1003 and higher
Manufacturer	SPEAG Zeughausstrasse 43 CH-8004 Zürich Switzerland

Tests
Complete tests were made on the prototype units QD OVA 001 AA 1001, QD OVA 001 AB 1002, pre-series units QD OVA 001 BA 1003-1005 as well as on the series units QD OVA 001 BB, 1006 ff.

Test	Requirement	Details	Units tested
Dimensions	Compliant with the standard IEC 62209 – 2 [1] requirements	Dimensions of bottom for 300 MHz – 6 GHz: longitudinal = 600 mm (max. dimension) width= 400 mm (min dimension) depth= 190 mm Shape: ellipse	Prototypes, Samples
Material thickness	Compliant with the standard IEC 62209 – 2 [1] requirements	Bottom plate: 2.0mm +/- 0.2mm	Prototypes, All items
Material parameters	Dielectric parameters for required frequencies	300 MHz – 6 GHz Rel. permittivity = 4 +/-1, Loss tangent ≤ 0.05	Material sample
Material resistivity	The material has been tested to be compatible with the liquids defined in the standards if handled and cleaned according to the instructions. Observe Technical Note for material compatibility.	DEGMBE based simulating liquids	Equivalent phantoms, Material sample
Sagging	Compliant with the requirements according to the standard. Sagging of the flat section when filled with tissue simulating liquid	< 1% typical < 0.8% if filled with 155mm of HSL900 and without DUT below	Prototypes, Sample testing

Standards
[1] IEC 62209 – 2, Draft Version 0.9, "Evaluation of Human Exposure to Radio Frequency Fields from Handheld and Body-Mounted Wireless Communication Devices in the Frequency Range of 30 MHz to 6 GHz: Human models, Instrumentation and Procedures
Part 2: Procedure to determine the Specific Absorption Rate (SAR) for ... including accessories and multiple transmitters", December 2004

Conformity
Based on the sample tests above, we certify that this item is in compliance with the standard [1].

Date 07.07.2005

Signature / Stamp

Schmid & Partner Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland
Phone +41 1 245 9700, Fax +41 1 245 9779
info@speag.com, http://www.speag.com

Doc No 881 – QD OVA 001 B - C Page 1 (1)

Fig. 11: Certificate of conformity for the ELI phantom.