

Validation Report for Head TSL of 5.8GHz

Validation Report for Body TSL of 5.2GHz

Test Laboratory: BTL Inc. Date: 2018/12/25

Test Laboratory: BTL Inc. Date: 2018/12/25

System Check\_H5800\_7396

System Check\_B5200\_7396

DUT: Dipole D5GHzV2;SN:1160

DUT: Dipole D5GHzV2;SN:1160

Communication System: UID 0, CW (0); Frequency: 5800 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 5800$  MHz;  $\sigma = 5.479$  S/m;  $\epsilon_r = 34.208$ ;  $\rho = 996$  kg/m<sup>3</sup>  
 Ambient Temperature : 23.2 °C; Liquid Temperature : 22.5 °C

Communication System: UID 0, CW (0); Frequency: 5200 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 5200$  MHz;  $\sigma = 5.372$  S/m;  $\epsilon_r = 47.807$ ;  $\rho = 996$  kg/m<sup>3</sup>  
 Ambient Temperature : 23.2 °C; Liquid Temperature : 22.5 °C

DASY Configuration

DASY Configuration

- Probe: EX3DV4 - SN7396; ConvF(5.05, 5.05, 5.05) @ 5800 MHz; Calibrated: 2018/5/29
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = 1.0, 23.0$
- Electronics: DAE4 Sn1390; Calibrated: 2018/5/11
- Phantom: SAM Right; Type: Twin SAM; Serial: 1896
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

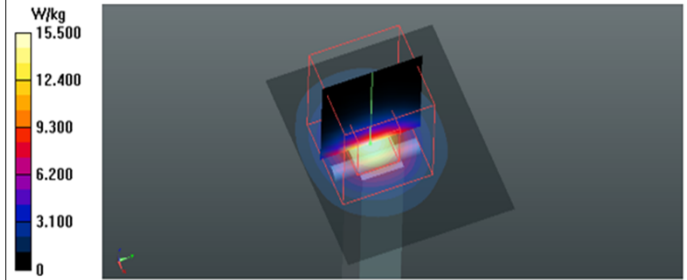
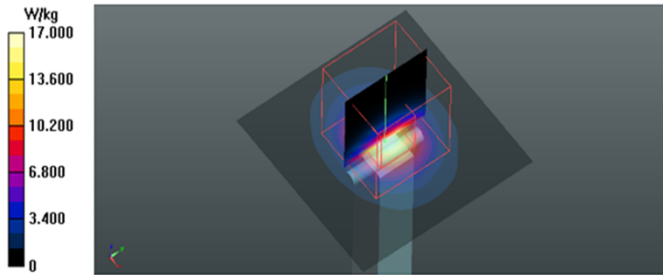
- Probe: EX3DV4 - SN7396; ConvF(5.3, 5.3, 5.3) @ 5200 MHz; Calibrated: 2018/5/29
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = 1.0, 23.0$
- Electronics: DAE4 Sn1390; Calibrated: 2018/5/11
- Phantom: SAM Right; Type: Twin SAM; Serial: 1896
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

Area Scan (6x6x1): Interpolated grid:  $dx=10$  mm,  $dy=10$  mm  
 Maximum value of SAR (interpolated) = 17.5 W/kg

Area Scan (6x5x1): Interpolated grid:  $dx=10$  mm,  $dy=10$  mm  
 Maximum value of SAR (interpolated) = 15.9 W/kg

Zoom Scan (7x7x12)/Cube 0: Measurement grid:  $dx=4$  mm,  $dy=4$  mm,  $dz=2$  mm  
 Reference Value = 39.17 V/m; Power Drift = -0.06 dB  
 Peak SAR (extrapolated) = 37.5 W/kg  
**SAR(1 g) = 7.89 W/kg; SAR(10 g) = 2.21 W/kg**  
 Maximum value of SAR (measured) = 17.0 W/kg

Zoom Scan (7x7x12)/Cube 0: Measurement grid:  $dx=4$  mm,  $dy=4$  mm,  $dz=2$  mm  
 Reference Value = 35.81 V/m; Power Drift = 0.06 dB  
 Peak SAR (extrapolated) = 31.3 W/kg  
**SAR(1 g) = 7.28 W/kg; SAR(10 g) = 2.06 W/kg**  
 Maximum value of SAR (measured) = 15.5 W/kg



Validation Report for Body TSL of 5.3GHz

Validation Report for Body TSL of 5.5GHz

Test Laboratory: BTL Inc. Date: 2018/12/25

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System Check\_B5300\_7396

System Check\_B5500\_7396

DUT: Dipole D5GHzV2;SN:1160

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Communication System: UID 0, CW (0); Frequency: 5300 MHz; Duty Cycle: 1:1  
 Medium parameters used: f = 5300 MHz;  $\sigma = 5.507$  S/m;  $\epsilon_r = 47.625$ ;  $\rho = 996$  kg/m<sup>3</sup>  
 Ambient Temperature : 23.2 °C; Liquid Temperature : 22.5 °C

Communication System: UID 0, CW (0); Frequency: 5500 MHz; Duty Cycle: 1:1  
 Medium parameters used: f = 5500 MHz;  $\sigma = 5.797$  S/m;  $\epsilon_r = 47.264$ ;  $\rho = 996$  kg/m<sup>3</sup>  
 Ambient Temperature : 23.2 °C; Liquid Temperature : 22.5 °C

DASY Configuration:

DASY Configuration:

- Probe: EX3DV4 - SN7396; ConvF(5.05, 5.05, 5.05) @ 5300 MHz; Calibrated: 2018/5/29
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 23.0
- Electronics: DAE4 Sn1390; Calibrated: 2018/5/11
- Phantom: SAM Right; Type: Twin SAM; Serial: 1896
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

- Probe: EX3DV4 - SN7396; ConvF(4.38, 4.38, 4.38) @ 5500 MHz; Calibrated: 2018/5/29
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 23.0
- Electronics: DAE4 Sn1390; Calibrated: 2018/5/11
- Phantom: SAM Right; Type: Twin SAM; Serial: 1896
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

Area Scan (5x5x1): Interpolated grid: dx=10 mm, dy=10 mm  
 Maximum value of SAR (interpolated) = 14.7 W/kg

Area Scan (5x5x1): Interpolated grid: dx=10 mm, dy=10 mm  
 Maximum value of SAR (interpolated) = 16.4 W/kg

Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm  
 Reference Value = 34.45 V/m; Power Drift = 0.06 dB

Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm  
 Reference Value = 38.51 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 30.9 W/kg

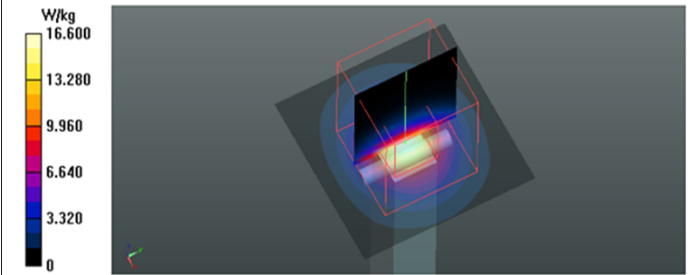
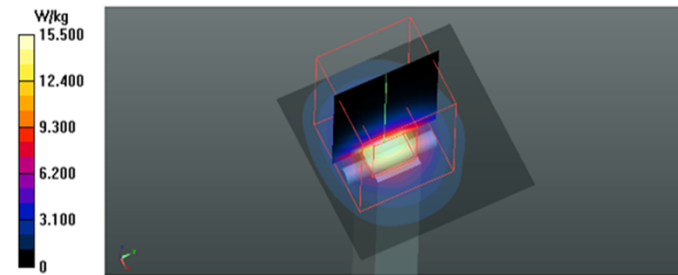
Peak SAR (extrapolated) = 33.9 W/kg

SAR(1 g) = 7.16 W/kg; SAR(10 g) = 2 W/kg

SAR(1 g) = 7.72 W/kg; SAR(10 g) = 2.16 W/kg

Maximum value of SAR (measured) = 15.5 W/kg

Maximum value of SAR (measured) = 16.6 W/kg



Validation Report for Body TSL of 5.6GHz

Validation Report for Body TSL of 5.8GHz

Test Laboratory: BTL Inc. Date: 2018/12/25

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System Check\_B5600\_7396

System Check\_B5800\_7396

DUT: Dipole D5GHzV2;SN:1160

DUT: Dipole D5GHzV2;SN:1160

Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1  
 Medium parameters used: f = 5600 MHz;  $\sigma = 5.947 \text{ S/m}$ ;  $\epsilon_r = 47.073$ ;  $\rho = 996 \text{ kg/m}^3$   
 Ambient Temperature : 23.2 °C; Liquid Temperature : 22.5 °C

Communication System: UID 0, CW (0); Frequency: 5800 MHz; Duty Cycle: 1:1  
 Medium parameters used: f = 5800 MHz;  $\sigma = 6.239 \text{ S/m}$ ;  $\epsilon_r = 46.673$ ;  $\rho = 996 \text{ kg/m}^3$   
 Ambient Temperature : 23.2 °C; Liquid Temperature : 22.5 °C

DASY Configuration:

DASY Configuration:

- Probe: EX3DV4 - SN7396; ConyE(4.38, 4.38, 4.38) @ 5600 MHz; Calibrated: 2018/5/29
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 23.0
- Electronics: DAE4 Sn1390; Calibrated: 2018/5/11
- Phantom: SAM Right; Type: Twin SAM; Serial: 1896
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

- Probe: EX3DV4 - SN7396; ConyE(4.5, 4.5, 4.5) @ 5800 MHz; Calibrated: 2018/5/29
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 23.0
- Electronics: DAE4 Sn1390; Calibrated: 2018/5/11
- Phantom: SAM Right; Type: Twin SAM; Serial: 1896
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

Area Scan (6x6x1): Interpolated grid: dx=10 mm, dy=10 mm  
 Maximum value of SAR (interpolated) = 16.5 W/kg

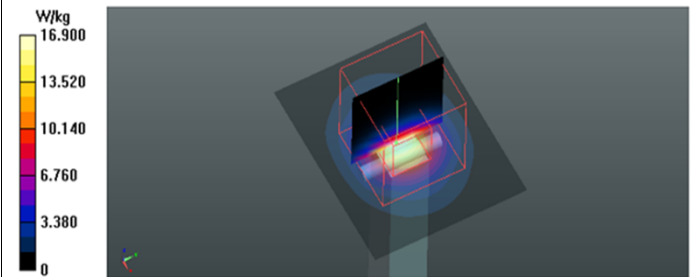
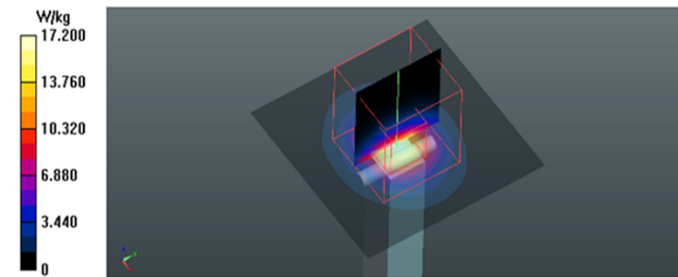
Area Scan (6x5x1): Interpolated grid: dx=10 mm, dy=10 mm  
 Maximum value of SAR (interpolated) = 16.6 W/kg

Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm  
 Reference Value = 38.11 V/m; Power Drift = -0.17 dB

Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm  
 Reference Value = 37.07 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 35.4 W/kg  
 SAR(1 g) = 7.92 W/kg; SAR(10 g) = 2.2 W/kg  
 Maximum value of SAR (measured) = 17.2 W/kg

Peak SAR (extrapolated) = 35.6 W/kg  
 SAR(1 g) = 7.79 W/kg; SAR(10 g) = 2.16 W/kg  
 Maximum value of SAR (measured) = 16.9 W/kg



Calibrator: *Rot - Liang*

Approver: *Herbert Liu*