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DASY5 Validation Report for Head TSL

Date: 02.12.2020

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1200

Communication System: CW; Frequency: 5200 MHz, Frequency: 5300 MHz,
Frequency: 5500 MHz, Frequency: 5600 MHz, Frequency: 5800 MHz,
Medium parameters used: $f = 5200$ MHz; $\sigma = 4.58$ S/m; $\epsilon_r = 36.67$; $\rho = 1000$ kg/m³,
Medium parameters used: $f = 5300$ MHz; $\sigma = 4.691$ S/m; $\epsilon_r = 36.46$; $\rho = 1000$
kg/m³, Medium parameters used: $f = 5500$ MHz; $\sigma = 4.898$ S/m; $\epsilon_r = 36.1$; $\rho = 1000$
kg/m³, Medium parameters used: $f = 5600$ MHz; $\sigma = 5.009$ S/m; $\epsilon_r = 35.95$; $\rho =$
1000 kg/m³, Medium parameters used: $f = 5800$ MHz; $\sigma = 5.204$ S/m; $\epsilon_r = 35.67$; $\rho =$
1000 kg/m³,

Phantom section: Center Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7307; ConvF(5.71, 5.71, 5.71) @ 5200 MHz;
ConvF(5.48, 5.48, 5.48) @ 5300 MHz; ConvF(5.25, 5.25, 5.25) @ 5500
MHz; ConvF(5.12, 5.12, 5.12) @ 5600 MHz; ConvF(5.02, 5.02, 5.02) @
5800 MHz
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2019-09-04
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13
(7474)

Dipole Calibration /Pin=100mW, d=10mm, f=5200 MHz/Zoom Scan,
dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 64.68 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 31.5 W/kg
SAR(1 g) = 7.37 W/kg; SAR(10 g) = 2.06 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 63.5%
Maximum value of SAR (measured) = 17.5 W/kg

Dipole Calibration /Pin=100mW, d=10mm, f=5300 MHz/Zoom Scan,
dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 62.32 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 33.0 W/kg
SAR(1 g) = 7.79 W/kg; SAR(10 g) = 2.21 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 63.5%
Maximum value of SAR (measured) = 18.6 W/kg

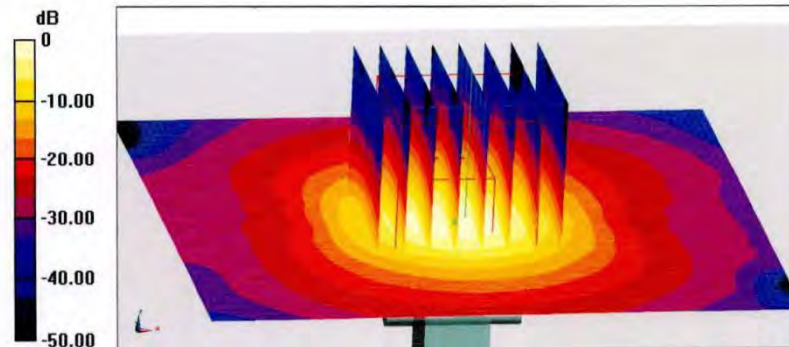


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Dipole Calibration /Pin=100mW, d=10mm, f=5500 MHz/Zoom Scan,
dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 63.14 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 36.1 W/kg
SAR(1 g) = 8.09 W/kg; SAR(10 g) = 2.27 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 61.7%
Maximum value of SAR (measured) = 19.6 W/kg

Dipole Calibration /Pin=100mW, d=10mm, f=5600 MHz/Zoom Scan,
dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 63.98 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 33.7 W/kg
SAR(1 g) = 8.01 W/kg; SAR(10 g) = 2.25 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 64%
Maximum value of SAR (measured) = 18.9 W/kg

Dipole Calibration /Pin=100mW, d=10mm, f=5800 MHz/Zoom Scan,
dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 63.47 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 38.5 W/kg
SAR(1 g) = 7.68 W/kg; SAR(10 g) = 2.13 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 58.9%
Maximum value of SAR (measured) = 19.4 W/kg



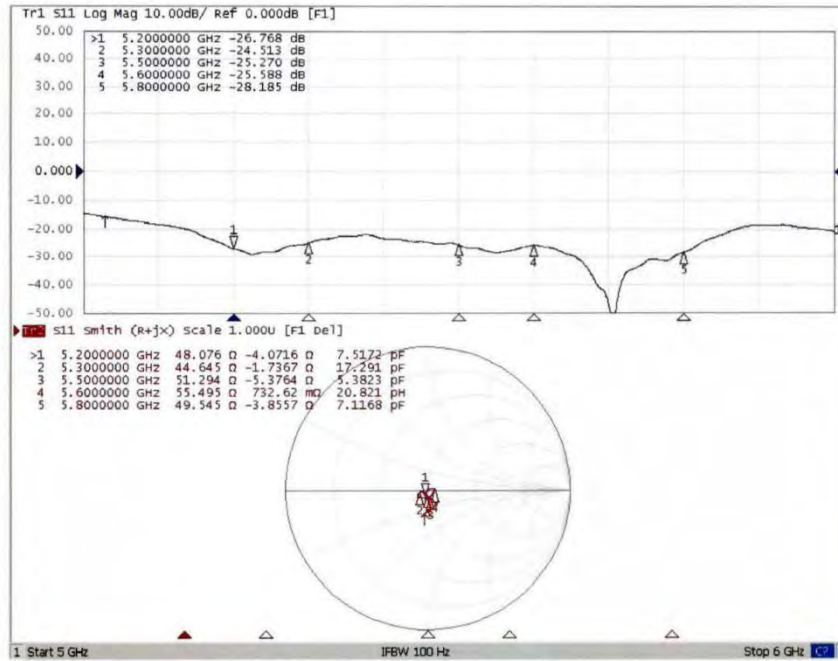
0 dB = 19.4 W/kg = 12.88 dBW/kg



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Impedance Measurement Plot for Head TSL





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DASY5 Validation Report for Body TSL

Date: 02.17.2020

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1200

Communication System: CW; Frequency: 5200 MHz, Frequency: 5300 MHz,
Frequency: 5500 MHz, Frequency: 5600 MHz, Frequency: 5800 MHz,

Medium parameters used: $f = 5200$ MHz; $\sigma = 5.218$ S/m; $\epsilon_r = 48.51$; $\rho = 1000$ kg/m³,

Medium parameters used: $f = 5300$ MHz; $\sigma = 5.346$ S/m; $\epsilon_r = 48.35$; $\rho = 1000$ kg/m³,

Medium parameters used: $f = 5500$ MHz; $\sigma = 5.609$ S/m; $\epsilon_r = 47.99$; $\rho = 1000$ kg/m³,

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.752$ S/m; $\epsilon_r = 47.77$; $\rho = 1000$ kg/m³,

Medium parameters used: $f = 5800$ MHz; $\sigma = 6.092$ S/m; $\epsilon_r = 47.33$; $\rho = 1000$ kg/m³,

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7307; ConvF(4.85, 4.85, 4.85) @ 5200 MHz; ConvF(4.69, 4.69, 4.69) @ 5300 MHz; ConvF(4.4, 4.4, 4.4) @ 5500 MHz; ConvF(4.3, 4.3, 4.3) @ 5600 MHz; ConvF(4.39, 4.39, 4.39) @ 5800 MHz; Calibrated: 5/24/2019,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2019-09-04
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Dipole Calibration /Pin=100mW, d=10mm, f=5200 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 60.83 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 27.8 W/kg

SAR(1 g) = 7.07 W/kg; SAR(10 g) = 1.96 W/kg

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 66.3%

Maximum value of SAR (measured) = 16.5 W/kg

Dipole Calibration /Pin=100mW, d=10mm, f=5300 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 63.35 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 29.2 W/kg

SAR(1 g) = 7.5 W/kg; SAR(10 g) = 2.1 W/kg

Smallest distance from peaks to all points 3 dB below = 6.9 mm

Ratio of SAR at M2 to SAR at M1 = 66.7%

Maximum value of SAR (measured) = 17.1 W/kg



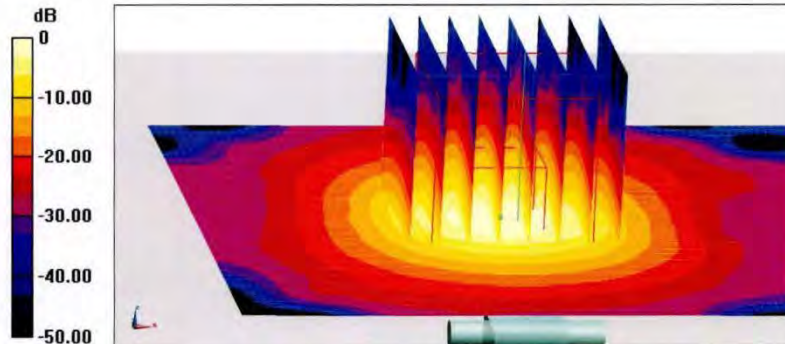
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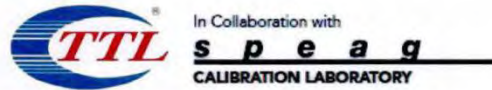
Dipole Calibration /Pin=100mW, d=10mm, f=5500 MHz/Zoom Scan,
dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 64.39 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 32.4 W/kg
SAR(1 g) = 7.78 W/kg; SAR(10 g) = 2.17 W/kg
Smallest distance from peaks to all points 3 dB below = 6.8 mm
Ratio of SAR at M2 to SAR at M1 = 64.6%
Maximum value of SAR (measured) = 18.2 W/kg

Dipole Calibration /Pin=100mW, d=10mm, f=5600 MHz/Zoom Scan,
dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 61.29 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 33.3 W/kg
SAR(1 g) = 7.45 W/kg; SAR(10 g) = 2.08 W/kg
Smallest distance from peaks to all points 3 dB below = 7.4 mm
Ratio of SAR at M2 to SAR at M1 = 62.1%
Maximum value of SAR (measured) = 18.4 W/kg

Dipole Calibration /Pin=100mW, d=10mm, f=5800 MHz/Zoom Scan,
dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 59.16 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 34.5 W/kg
SAR(1 g) = 7.28 W/kg; SAR(10 g) = 2 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 59.9%
Maximum value of SAR (measured) = 18.5 W/kg



0 dB = 18.5 W/kg = 12.67 dBW/kg



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