



In Collaboration with

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CALIBRATION LABORATORY

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DASY5 Validation Report for Head TSL

Date: 09.27.2018

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1221

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

Medium parameters used: $f = 5200$ MHz; $\sigma = 4.748$ S/m; $\epsilon_r = 35.09$; $\rho = 1000$ kg/m³, Medium parameters used: $f = 5300$ MHz; $\sigma = 4.864$ S/m; $\epsilon_r = 34.85$; $\rho = 1000$ kg/m³, Medium parameters used: $f = 5600$ MHz; $\sigma = 5.193$ S/m; $\epsilon_r = 34.51$; $\rho = 1000$ kg/m³, Medium parameters used: $f = 5800$ MHz; $\sigma = 5.411$ S/m; $\epsilon_r = 34.3$; $\rho = 1000$ kg/m³,

Phantom section: Center Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7514; ConvF(5.05, 5.05, 5.05) @ 5200 MHz; Calibrated: 8/27/2018, ConvF(4.99, 4.99, 4.99) @ 5300 MHz; Calibrated: 8/27/2018, ConvF(4.41, 4.41, 4.41) @ 5600 MHz; Calibrated: 8/27/2018, ConvF(4.42, 4.42, 4.42) @ 5800 MHz; Calibrated: 8/27/2018,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1555; Calibrated: 8/20/2018
- Phantom: MFP_V5.1C ; Type: QD 000 P51CA; Serial: 1062
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

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 = 67.34 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 32.0 W/kg

SAR(1 g) = 7.71 W/kg; SAR(10 g) = 2.21 W/kg

Maximum value of SAR (measured) = 18.5 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 = 67.74 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 34.7 W/kg

SAR(1 g) = 7.94 W/kg; SAR(10 g) = 2.27 W/kg

Maximum value of SAR (measured) = 19.4 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 = 66.14 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 37.5 W/kg

SAR(1 g) = 8.07 W/kg; SAR(10 g) = 2.31 W/kg

Maximum value of SAR (measured) = 19.8 W/kg

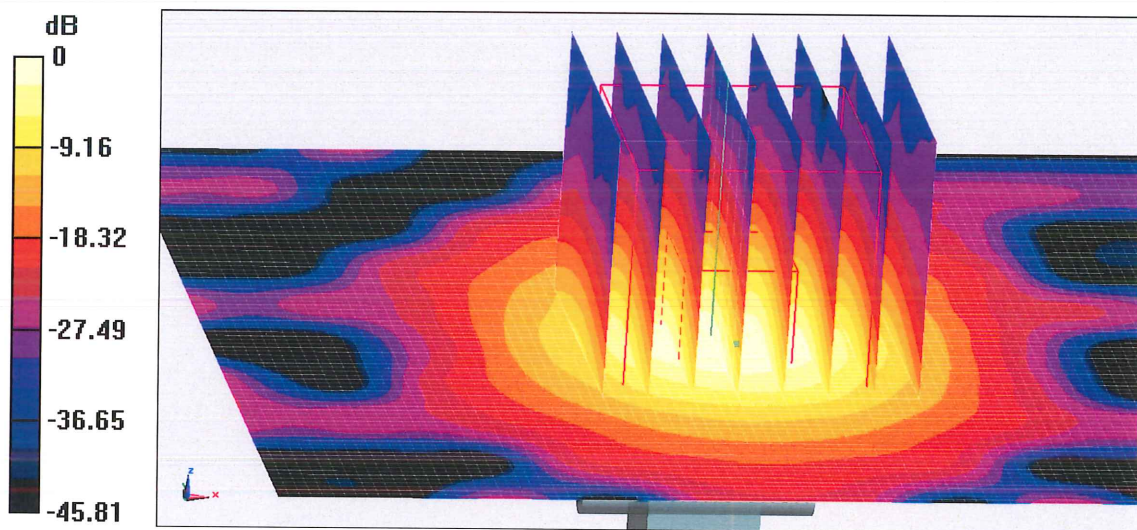


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Dipole Calibration /Pin=100mW, d=10mm, f=5800 MHz/Zoom Scan,
dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 60.94 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 37.4 W/kg
SAR(1 g) = 7.72 W/kg; SAR(10 g) = 2.2 W/kg
Maximum value of SAR (measured) = 19.3 W/kg



0 dB = 19.3 W/kg = 12.86 dBW/kg

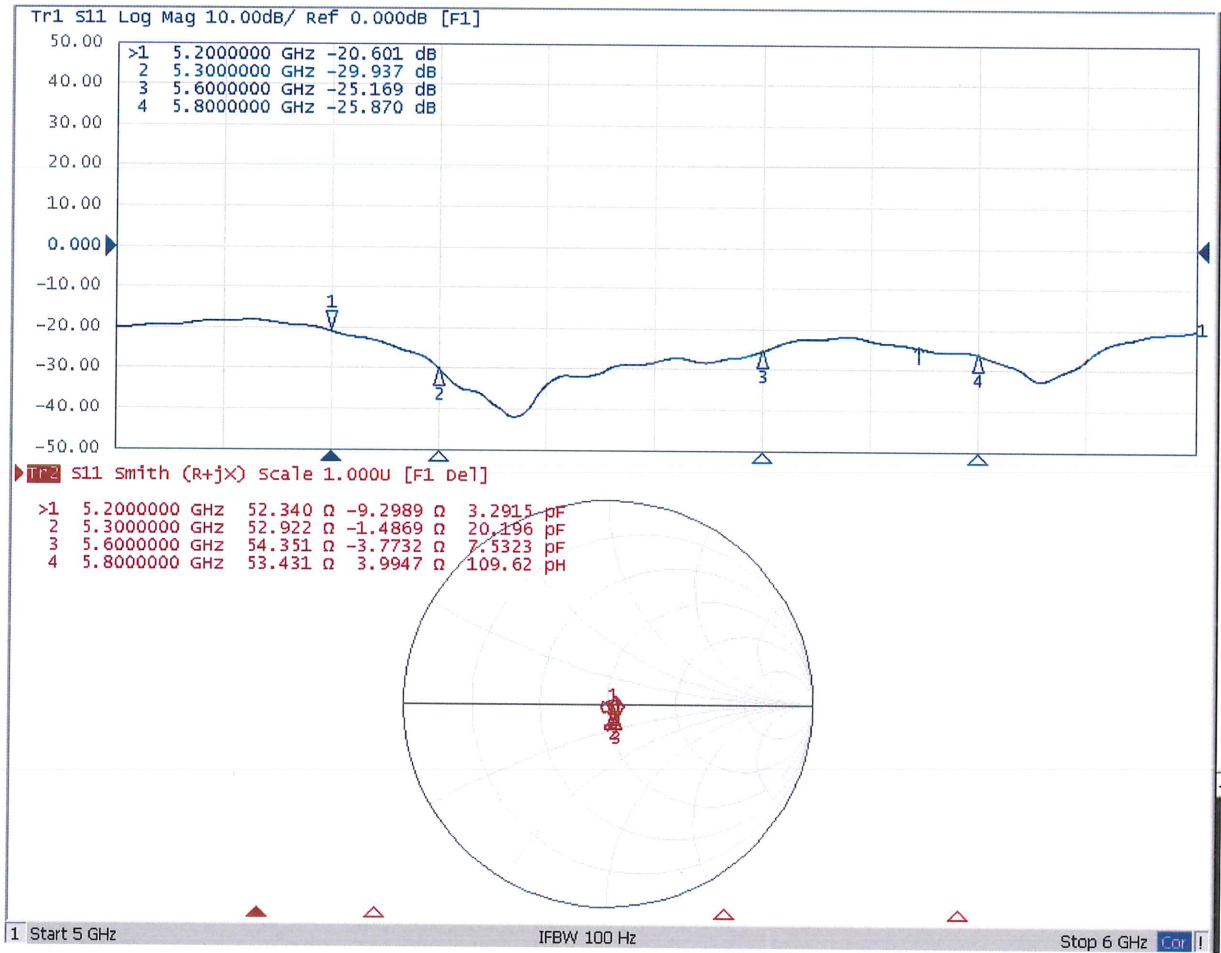


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Impedance Measurement Plot for Head TSL





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DASY5 Validation Report for Body TSL

Date: 09.25.2018

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1221

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

Medium parameters used: $f = 5200$ MHz; $\sigma = 5.344$ S/m; $\epsilon_r = 48.26$; $\rho = 1000$ kg/m³, Medium parameters used: $f = 5300$ MHz; $\sigma = 5.475$ S/m; $\epsilon_r = 48.09$; $\rho = 1000$ kg/m³, Medium parameters used: $f = 5600$ MHz; $\sigma = 5.88$ S/m; $\epsilon_r = 47.47$; $\rho = 1000$ kg/m³, Medium parameters used: $f = 5800$ MHz; $\sigma = 6.175$ S/m; $\epsilon_r = 46.98$; $\rho = 1000$ kg/m³,

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7514; ConvF(4.59, 4.59, 4.59) @ 5200 MHz; Calibrated: 8/27/2018, ConvF(4.49, 4.49, 4.49) @ 5300 MHz; Calibrated: 8/27/2018, ConvF(4, 4, 4) @ 5600 MHz; Calibrated: 8/27/2018, ConvF(3.94, 3.94, 3.94) @ 5800 MHz; Calibrated: 8/27/2018,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1555; Calibrated: 8/20/2018
- Phantom: MFP_V5.1C ; Type: QD 000 P51CA; Serial: 1062
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

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 = 61.19 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 28.0 W/kg

SAR(1 g) = 7.22 W/kg; SAR(10 g) = 2.06 W/kg

Maximum value of SAR (measured) = 17.1 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 = 61.08 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 30.7 W/kg

SAR(1 g) = 7.56 W/kg; SAR(10 g) = 2.15 W/kg

Maximum value of SAR (measured) = 18.4 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 = 62.98 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 35.3 W/kg

SAR(1 g) = 7.96 W/kg; SAR(10 g) = 2.25 W/kg

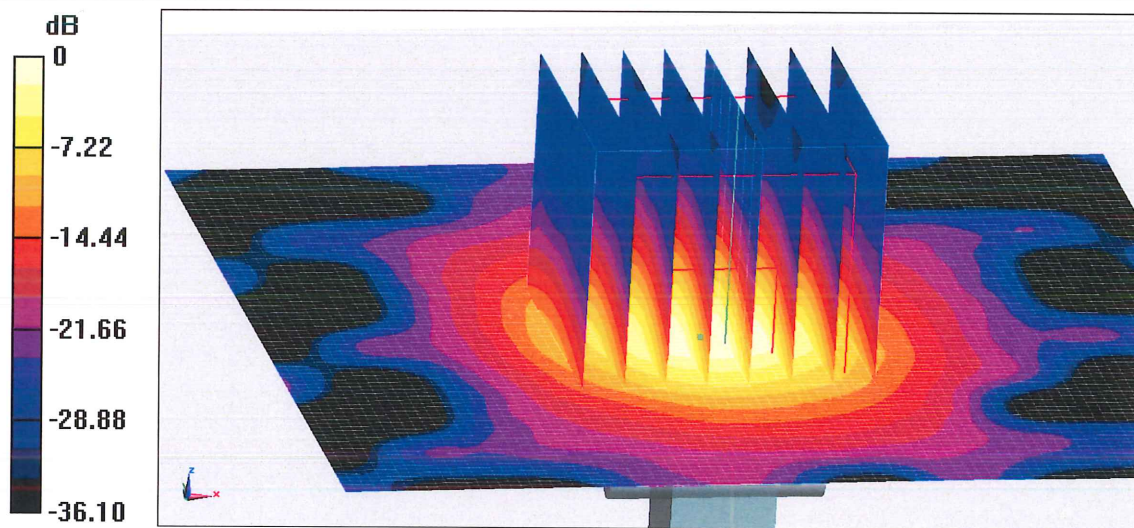
Maximum value of SAR (measured) = 19.7 W/kg



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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 = 58.20 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 35.7 W/kg
SAR(1 g) = 7.51 W/kg; SAR(10 g) = 2.11 W/kg
Maximum value of SAR (measured) = 19.0 W/kg



0 dB = 19.0 W/kg = 12.79 dBW/kg



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