Test Laboratory: Audix SAR Lab Date: 18/12/2015

ANT2 CH132 (5660MHz Top)

DUT: Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11a WiFi 5.5GHz (0); Communication System Band: IEEE 802.11a WiFi 5.5GHz; Frequency: 5660 MHz; Communication System PAR: 0 dB. Medium parameters used: f = 5660 MHz; σ = 5.54 S/m; ε_r = 49.0; ρ = 1000 kg/m^3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.73, 4.73, 4.73); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/ANT 2 CH132 (5660MHz Top)/Area Scan (51x71x1):

Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.0856 W/kg

Configuration/ANT 2 CH132 (5660MHz Top)/Zoom Scan (5x5x7)/Cube 0:

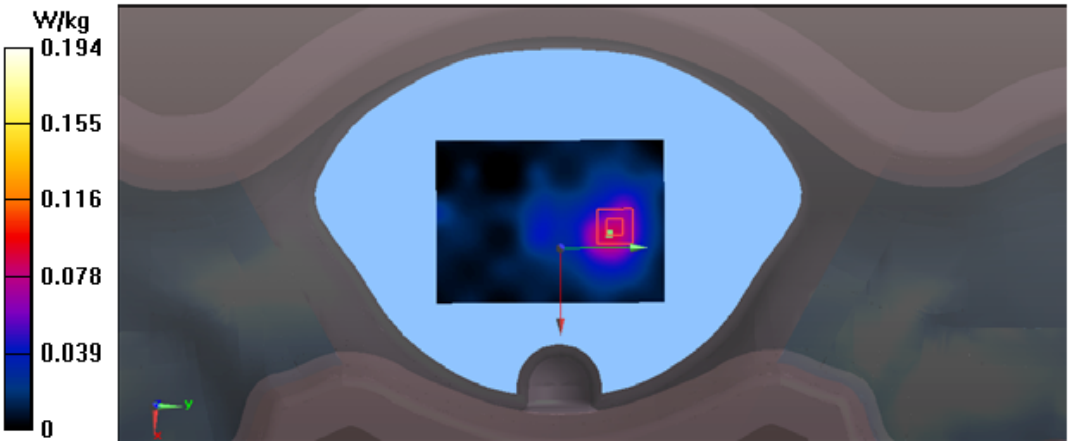
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.788 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.602 W/kg

SAR(1 g) = 0.178 W/kg; SAR(10 g) = 0.060 W/kg

Maximum value of SAR (measured) = 0.194 W/kg



Test Laboratory: Audix SAR Lab Date: 21/12/2015

ANT2 CH149(5745MHz Back)

DUT:Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11a WiFi 5.8GHz (0); Communication System Band: IEEE 802.11a WiFi 5.8GHz; Frequency: 5745 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5745 MHz; σ = 5.57 S/m; ε_r = 48.9; ρ = 1000 kg/m^3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.65, 4.65, 4.65); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/ANT 2 CH149(5745MHz Back)/Area Scan (51x71x1):

Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.128 W/kg

Configuration/ANT 2 CH149(5745MHz Back)/Zoom Scan (5x5x7)/Cube 0:

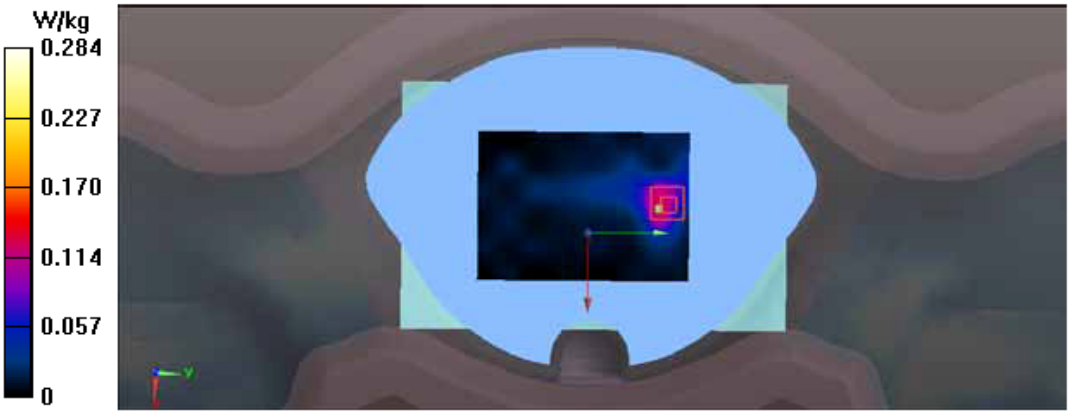
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.493 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.808 W/kg

SAR(1 g) = 0.235 W/kg; SAR(10 g) = 0.077 W/kg

Maximum value of SAR (measured) = 0.284 W/kg



Test Laboratory: Audix SAR Lab Date: 21/12/2015

ANT2 CH149(5745MHz Top)

DUT:Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11a WiFi 5.8GHz (0); Communication System Band: IEEE 802.11a WiFi 5.8GHz; Frequency: 5745 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5745 MHz; σ = 5.57 S/m; ε_r = 48.9; ρ = 1000 kg/m^3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.65, 4.65, 4.65); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/ANT 2 CH149(5745MHz Top)/Area Scan (51x71x1):

Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.111 W/kg

Configuration/ANT 2 CH149(5745MHz Top)/Zoom Scan (5x5x7)/Cube 0:

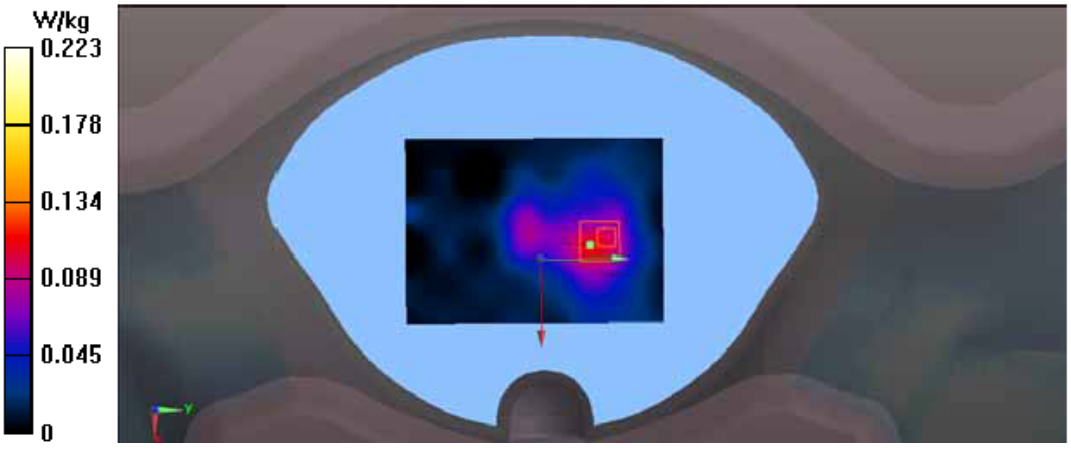
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.319 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.634 W/kg

SAR(1 g) = 0.191 W/kg; SAR(10 g) = 0.065 W/kg

Maximum value of SAR (measured) = 0.223 W/kg



WIFI 5G
mimo:

Test Laboratory: Audix SAR Lab Date: 17/12/2015

CH46(5230MHz Back)-mimo ant1

DUT:Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11n HT40 WiFi 5.2GHz (0); Communication System Band: IEEE 802.11n HT20 WiFi 5.2GHz; Frequency: 5230 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5230 MHz; σ = 5.34 S/m; ε_r = 50.39; ρ = 1000 kg/m^3.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(5.44, 5.44, 5.44); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/CH46(5230MHz Back)-mimo/Area Scan (51x51x1): Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.217 W/kg

Configuration/CH46(5230MHz Back)-mimo/Zoom Scan (5x5x7)/Cube 0:

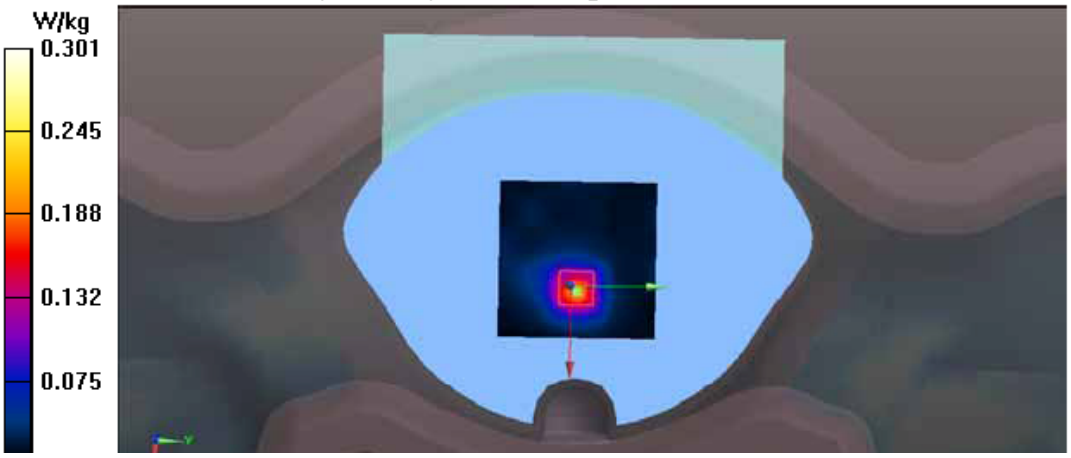
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.611 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.768 W/kg

SAR(1 g) = 0.258 W/kg; SAR(10 g) = 0.107 W/kg

Maximum value of SAR (measured) = 0.301 W/kg



Test Laboratory: Audix SAR Lab Date: 17/12/2015

CH46(5230MHz Back)-mimo ant2

DUT:Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11n HT40 WiFi 5.2GHz (0); Communication System Band: IEEE 802.11n HT20 WiFi 5.2GHz; Frequency: 5230 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5230 MHz; σ = 5.34 S/m; ε_r = 50.39; ρ = 1000 kg/m^3.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(5.44, 5.44, 5.44); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/CH46(5230MHz Back)-mimo/Area Scan (51x51x1): Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.241 W/kg

Configuration/CH46(5230MHz Back)-mimo/Zoom Scan (5x5x7)/Cube 0:

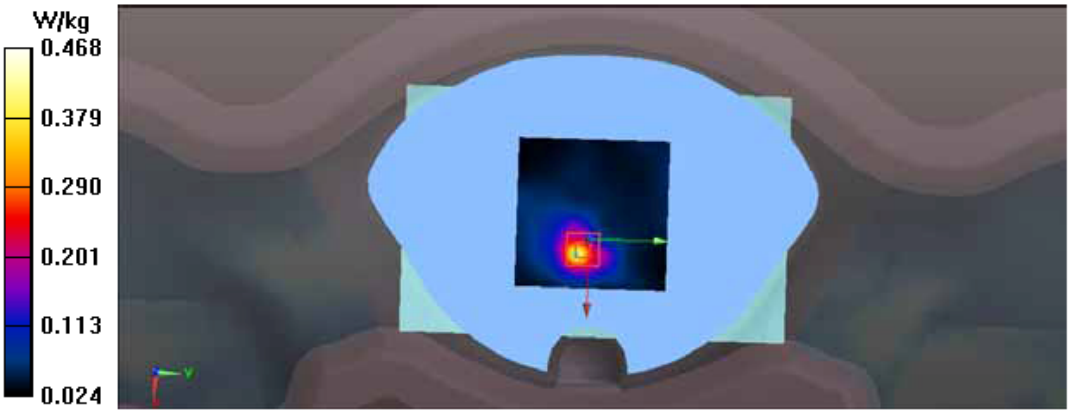
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.947 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.615 W/kg

SAR(1 g) = 0.301 W/kg; SAR(10 g) = 0.136 W/kg

Maximum value of SAR (measured) = 0.468 W/kg



Test Laboratory: Audix SAR Lab Date: 17/12/2015

CH46(5230MHz Top)-mimo ant1

DUT:Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11n HT40 WiFi 5.2GHz (0); Communication System Band: IEEE 802.11n HT20 WiFi 5.2GHz; Frequency: 5230 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5230 MHz; σ = 5.34 S/m; ε_r = 50.39; ρ = 1000 kg/m^3.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(5.44, 5.44, 5.44); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/CH46(5230MHz Top)-mimo/Area Scan (51x51x1): Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.593 W/kg

Configuration/CH46(5230MHz Top)-mimo/Zoom Scan (5x5x7)/Cube 0:

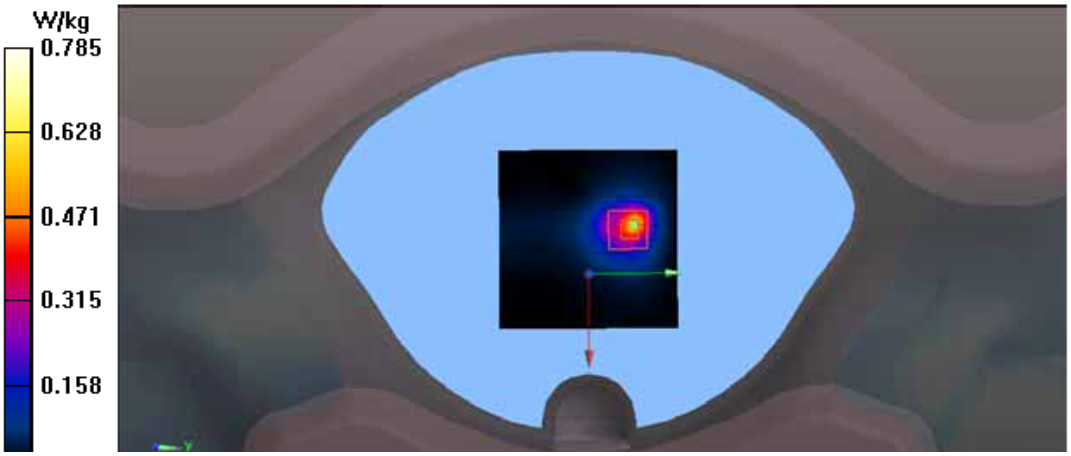
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.304 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 2.25 W/kg

SAR(1 g) = 0.204 W/kg; SAR(10 g) = 0.098 W/kg

Maximum value of SAR (measured) = 0.785 W/kg



Test Laboratory: Audix SAR Lab Date: 17/12/2015

CH46(5230MHz Top)-mimo ant2

DUT:Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11n HT40 WiFi 5.2GHz (0); Communication System Band: IEEE 802.11n HT20 WiFi 5.2GHz; Frequency: 5230 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5230 MHz; σ = 5.34 S/m; ε_r = 50.39; ρ = 1000 kg/m^3.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(5.44, 5.44, 5.44); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/CH46(5230MHz Top)-mimo/Area Scan (51x51x1): Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.106 W/kg

Configuration/CH46(5230MHz Top)-mimo/Zoom Scan (5x5x7)/Cube 0:

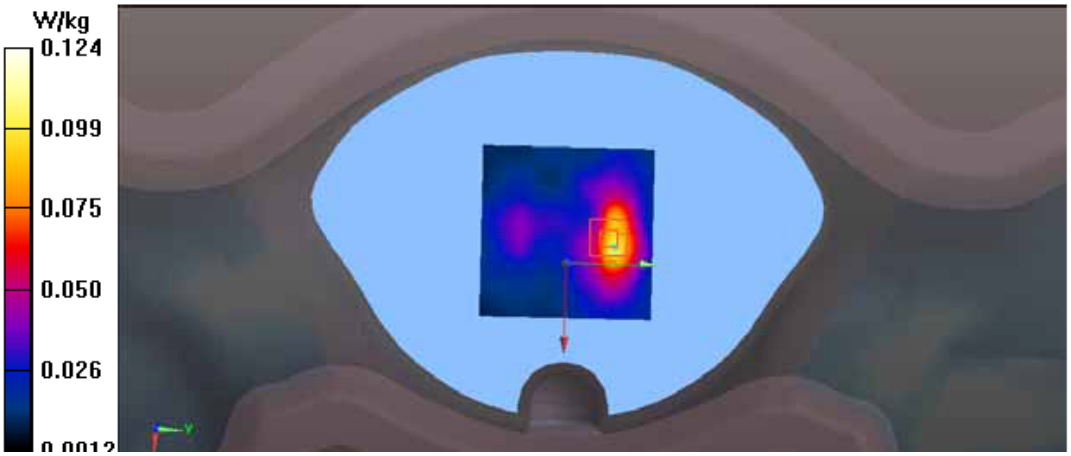
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.256 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.369 W/kg

SAR(1 g) = 0.117 W/kg; SAR(10 g) = 0.048 W/kg

Maximum value of SAR (measured) = 0.124 W/kg



Test Laboratory: Audix SAR Lab Date: 17/12/2015

CH62(5310MHz Back)-mimo ant1

DUT:Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11n HT40 WiFi 5.3GHz (0); Communication System Band: IEEE 802.11 n HT20 WiFi 5.3GHz ; Frequency: 5310 MHz;Communication System PAR: 0 dB.Medium parameters used (extrapolated): f = 5310 MHz; σ = 5.41 S/m; ε_r = 49.82; ρ = 1000 kg/m^3.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(5.09, 5.09, 5.09); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/CH62(5310MHz Back)-mimo/Area Scan (51x51x1): Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.208 W/kg

Configuration/CH62(5310MHz Back)-mimo/Zoom Scan (5x5x7)/Cube 0:

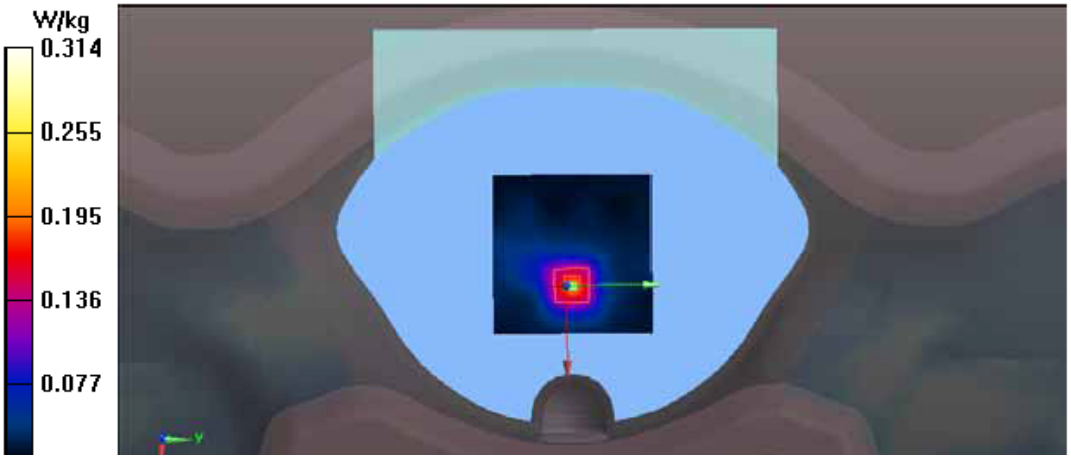
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.791 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.813 W/kg

SAR(1 g) = 0.273 W/kg; SAR(10 g) = 0.111 W/kg

Maximum value of SAR (measured) = 0.314 W/kg



Test Laboratory: Audix SAR Lab Date: 17/12/2015

CH62(5310MHz Back)-mimo ant2

DUT:Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11n HT40 WiFi 5.3GHz (0); Communication System Band: IEEE 802.11 n HT20 WiFi 5.3GHz ; Frequency: 5310 MHz;Communication System PAR: 0 dB.Medium parameters used (extrapolated): f = 5310 MHz; σ = 5.41 S/m; ε_r = 49.82; ρ = 1000 kg/m^3.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(5.09, 5.09, 5.09); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/CH62(5310MHz Back)-mimo/Area Scan (51x51x1): Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.285 W/kg

Configuration/CH62(5310MHz Back)-mimo/Zoom Scan (5x5x7)/Cube 0:

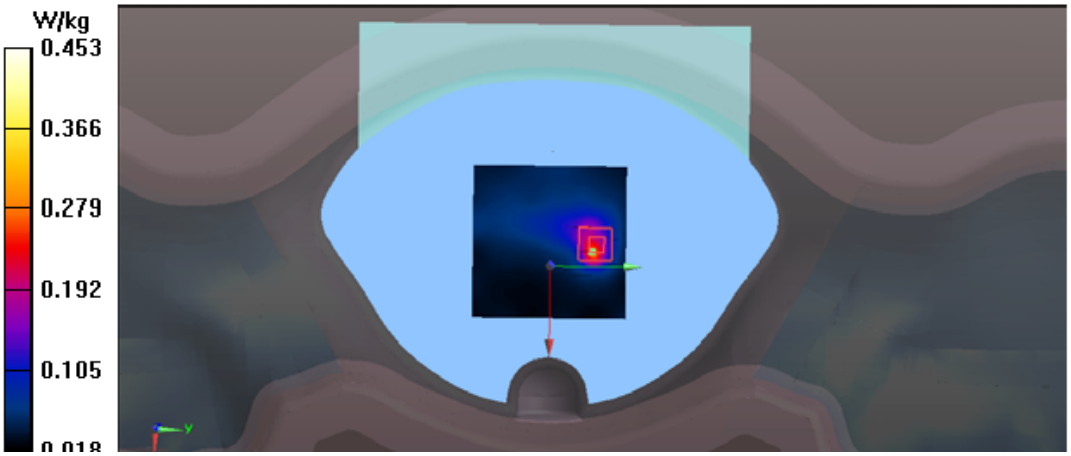
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.887 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.293 W/kg; SAR(10 g) = 0.151 W/kg

Maximum value of SAR (measured) = 0.453 W/kg



Test Laboratory: Audix SAR Lab Date: 17/12/2015

CH62(5310MHz top)-mimo ant1

DUT:Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11n HT40 WiFi 5.3GHz (0); Communication System Band: IEEE 802.11 n HT20 WiFi 5.3GHz ; Frequency: 5310 MHz;Communication System PAR: 0 dB.Medium parameters used (extrapolated): f = 5310 MHz; σ = 5.41 S/m; ε_r = 49.82; ρ = 1000 kg/m^3.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(5.09, 5.09, 5.09); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/CH62(5310MHz Top)-mimo/Area Scan (51x51x1): Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.599 W/kg

Configuration/CH62(5310MHz Top)-mimo/Zoom Scan (5x5x7)/Cube 0:

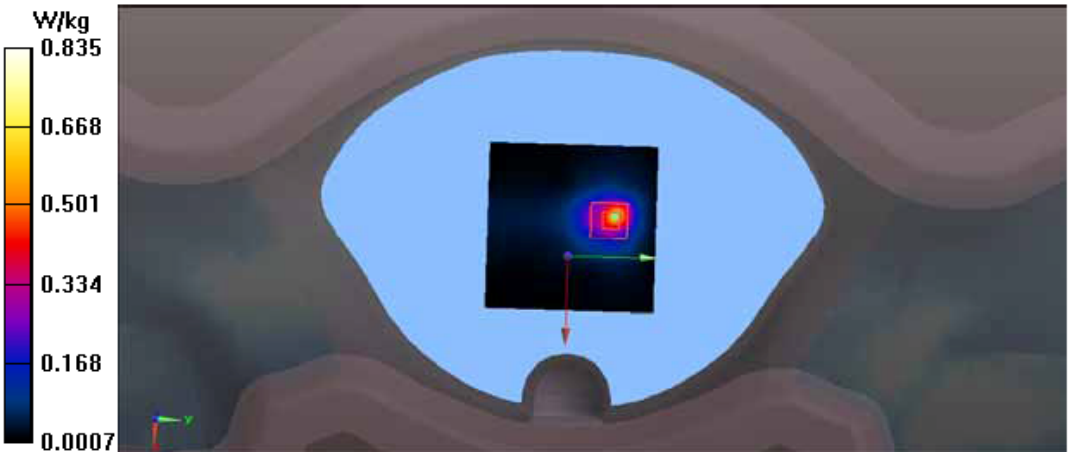
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.288 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.631 W/kg

SAR(1 g) = 0.213 W/kg; SAR(10 g) = 0.101 W/kg

Maximum value of SAR (measured) = 0.835 W/kg



Test Laboratory: Audix SAR Lab Date: 17/12/2015

CH62(5310MHz top)-mimo ant2

DUT:Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11n HT40 WiFi 5.3GHz (0); Communication System Band: IEEE 802.11 n HT20 WiFi 5.3GHz ; Frequency: 5310 MHz;Communication System PAR: 0 dB.Medium parameters used (extrapolated): f = 5310 MHz; σ = 5.41 S/m; ε_r = 49.82; ρ = 1000 kg/m^3.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(5.09, 5.09, 5.09); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/CH62(5310MHz Top)-mimo/Area Scan (51x51x1): Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.113 W/kg

Configuration/CH62(5310MHz Top)-mimo/Zoom Scan (5x5x7)/Cube 0:

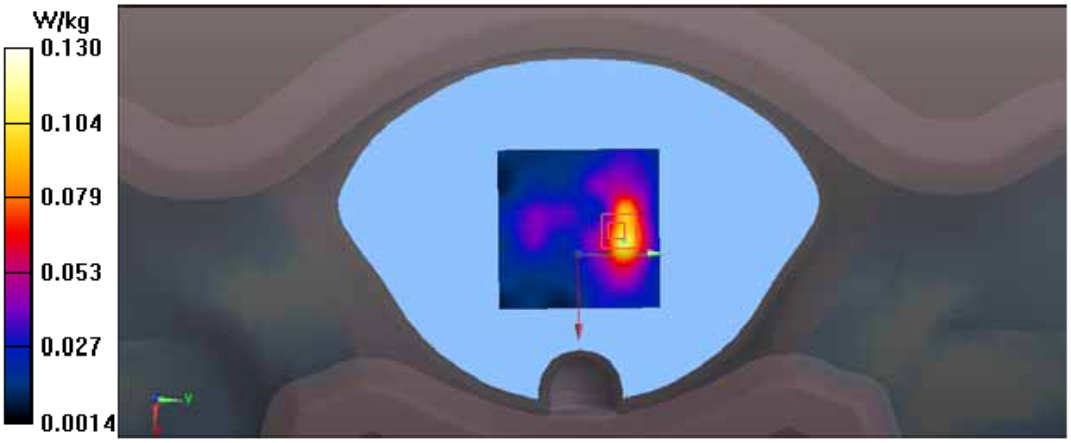
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.237 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.380 W/kg

SAR(1 g) = 0.124 W/kg; SAR(10 g) = 0.050 W/kg

Maximum value of SAR (measured) = 0.130 W/kg



Test Laboratory: Audix SAR Lab Date: 18/12/2015

CH102(5510MHz Back)-mimo ant1

DUT:Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11n HT40 WiFi 5.5GHz (0); Communication System Band: IEEE 802.11a WiFi 5.5GHz; Frequency: 5510 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5510 MHz; σ = 5.48 S/m; ε_r = 49.2; ρ = 1000 kg/m^3.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.83, 4.83, 4.83); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/CH102(5510MHz Back)-mimo/Area Scan (51x51x1):

Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.247 W/kg

Configuration/CH102(5510MHz Back)-mimo/Zoom Scan (5x5x7)/Cube 0:

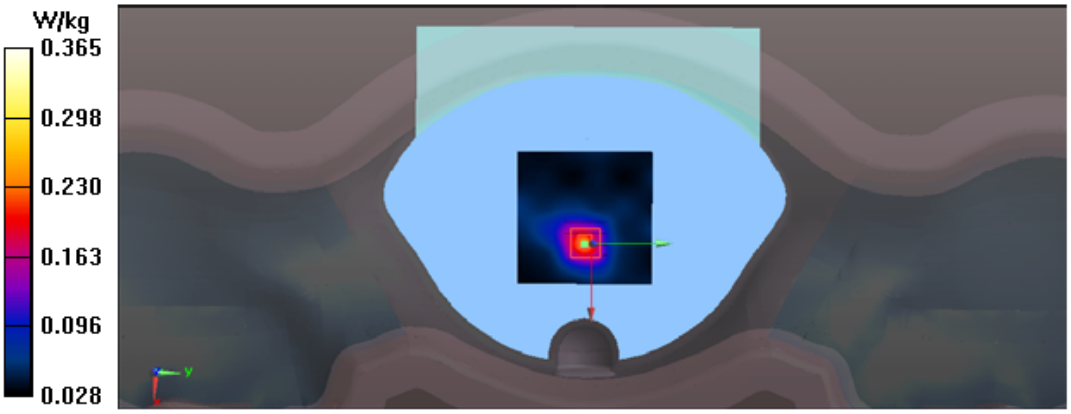
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.065 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.920 W/kg

SAR(1 g) = 0.299 W/kg; SAR(10 g) = 0.133 W/kg

Maximum value of SAR (measured) = 0.365 W/kg



Test Laboratory: Audix SAR Lab Date: 18/12/2015

CH102(5510MHz Back)-mimo ant2

DUT:Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11n HT40 WiFi 5.5GHz (0); Communication System Band: IEEE 802.11a WiFi 5.5GHz; Frequency: 5510 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5510 MHz; σ = 5.48 S/m; ε_r = 49.2; ρ = 1000 kg/m^3.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.83, 4.83, 4.83); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/CH102(5510MHz Back)-mimo/Area Scan (51x51x1):

Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.330 W/kg

Configuration/CH102(5510MHz Back)-mimo/Zoom Scan (5x5x7)/Cube 0:

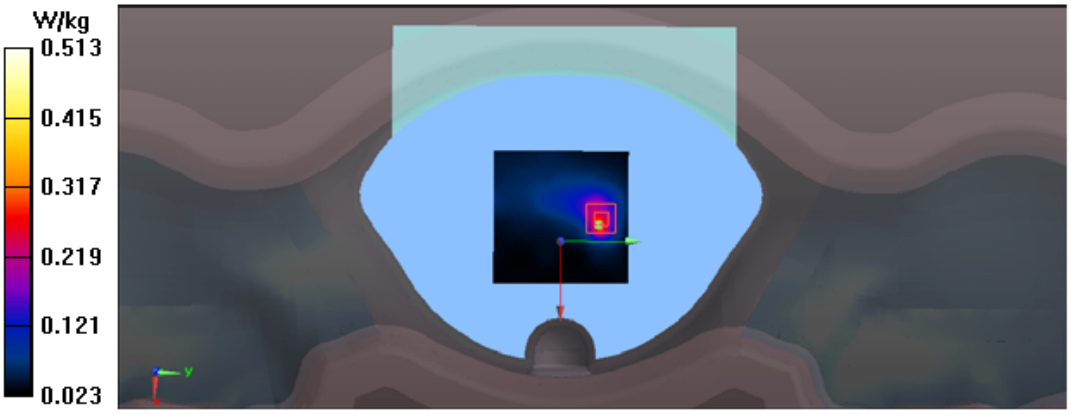
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.808 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.44 W/kg

SAR(1 g) = 0.296 W/kg; SAR(10 g) = 0.171 W/kg

Maximum value of SAR (measured) = 0.513 W/kg



Test Laboratory: Audix SAR Lab Date: 18/12/2015

CH102(5510MHz Top)-mimo ant1

DUT:Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11n HT40 WiFi 5.5GHz (0); Communication System Band: IEEE 802.11a WiFi 5.5GHz; Frequency: 5510 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5510 MHz; σ = 5.48 S/m; ε_r = 49.2; ρ = 1000 kg/m^3.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.83, 4.83, 4.83); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/CH102(5510MHz Top)-mimo/Area Scan (51x51x1): Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.723 W/kg

Configuration/CH102(5510MHz Top)-mimo/Zoom Scan (5x5x7)/Cube 0:

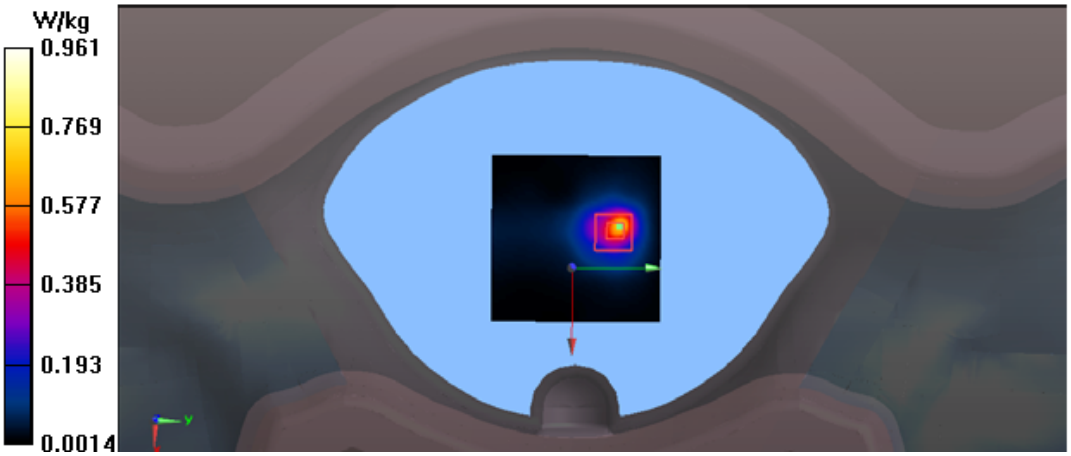
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.414 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.76 W/kg

SAR(1 g) = 0.207 W/kg; SAR(10 g) = 0.100 W/kg

Maximum value of SAR (measured) = 0.961 W/kg



Test Laboratory: Audix SAR Lab Date: 18/12/2015

CH102(5510MHz Top)-mimo ant2

DUT:Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11n HT40 WiFi 5.5GHz (0); Communication System Band: IEEE 802.11a WiFi 5.5GHz; Frequency: 5510 MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5510 MHz; σ = 5.48 S/m; ε_r = 49.2; ρ = 1000 kg/m^3.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.83, 4.83, 4.83); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/CH102(5510MHz Top)-mimo/Area Scan (51x51x1): Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.125 W/kg

Configuration/CH102(5510MHz Top)-mimo/Zoom Scan (5x5x7)/Cube 0:

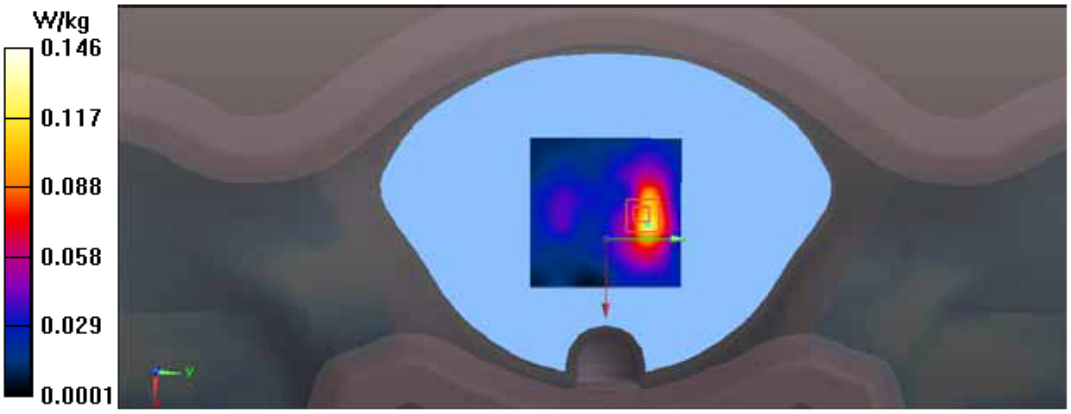
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.292 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.440 W/kg

SAR(1 g) = 0.139 W/kg; SAR(10 g) = 0.054 W/kg

Maximum value of SAR (measured) = 0.146 W/kg



Test Laboratory: Audix SAR Lab Date: 21/12/2015

CH151(5755MHz Back)-mimo ant1

DUT:Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11n HT40 WiFi 5.8GHz (0); Communication System Band: IEEE 802.11ac VHT40 WiFi 5.8GHz; Frequency: 5755MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5755 MHz; σ = 5.64 S/m; ε_r = 48.73; ρ = 1000 kg/m^3.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.65, 4.65, 4.65); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/CH151(5755MHz Back)-mimo/Area Scan (51x51x1):

Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.237 W/kg

Configuration/CH151(5755MHz Back)-mimo/Zoom Scan (5x5x7)/Cube 0:

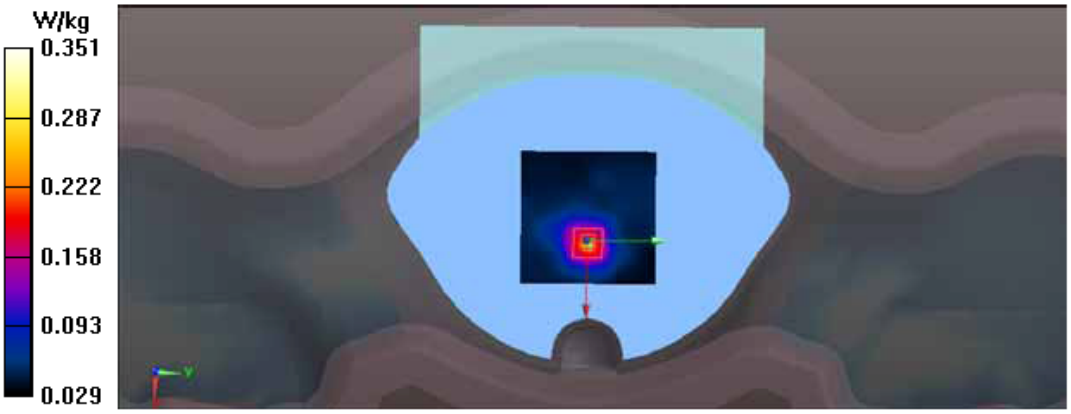
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.175 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.957 W/kg

SAR(1 g) = 0.327 W/kg; SAR(10 g) = 0.138 W/kg

Maximum value of SAR (measured) = 0.351 W/kg



Test Laboratory: Audix SAR Lab Date: 21/12/2015

CH151(5755MHz Back)-mimo ant2

DUT:Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11n HT40 WiFi 5.8GHz (0); Communication System Band: IEEE 802.11ac VHT40 WiFi 5.8GHz; Frequency: 5755MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5755 MHz; σ = 5.64 S/m; ε_r = 48.73; ρ = 1000 kg/m^3.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.65, 4.65, 4.65); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/CH151(5755MHz Back)-mimo/Area Scan (51x51x1):

Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.338 W/kg

Configuration/CH151(5755MHz Back)-mimo/Zoom Scan (5x5x7)/Cube 0:

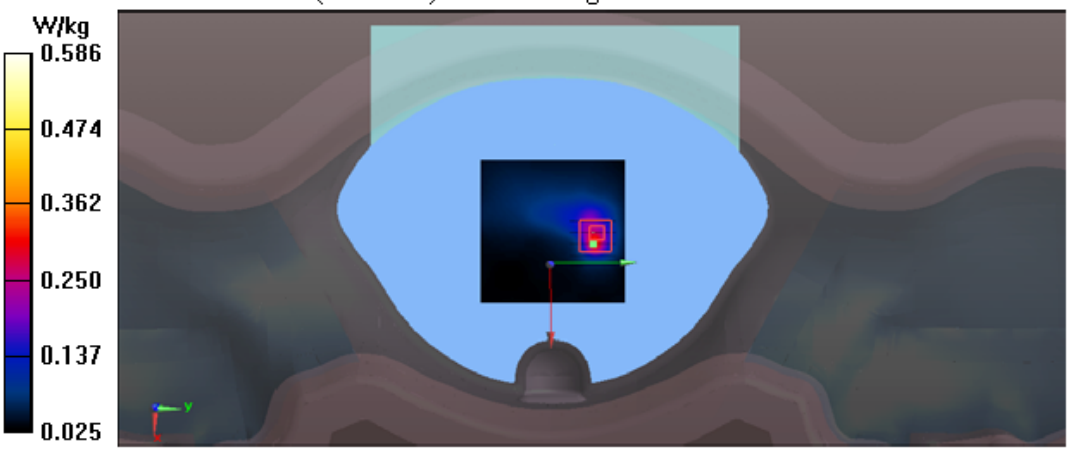
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.132 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.52 W/kg

SAR(1 g) = 0.314 W/kg; SAR(10 g) = 0.177 W/kg

Maximum value of SAR (measured) = 0.586 W/kg



Test Laboratory: Audix SAR Lab Date: 21/12/2015

CH151(5755MHz Top)-mimo ant1

DUT:Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11n HT40 WiFi 5.8GHz (0); Communication System Band: IEEE 802.11ac VHT40 WiFi 5.8GHz; Frequency: 5755MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5755 MHz; σ = 5.64 S/m; ε_r = 48.73; ρ = 1000 kg/m^3.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.65, 4.65, 4.65); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/CH151(5755MHz Top)-mimo/Area Scan (51x51x1): Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.767 W/kg

Configuration/CH151(5755MHz Top)-mimo/Zoom Scan (5x5x7)/Cube 0:

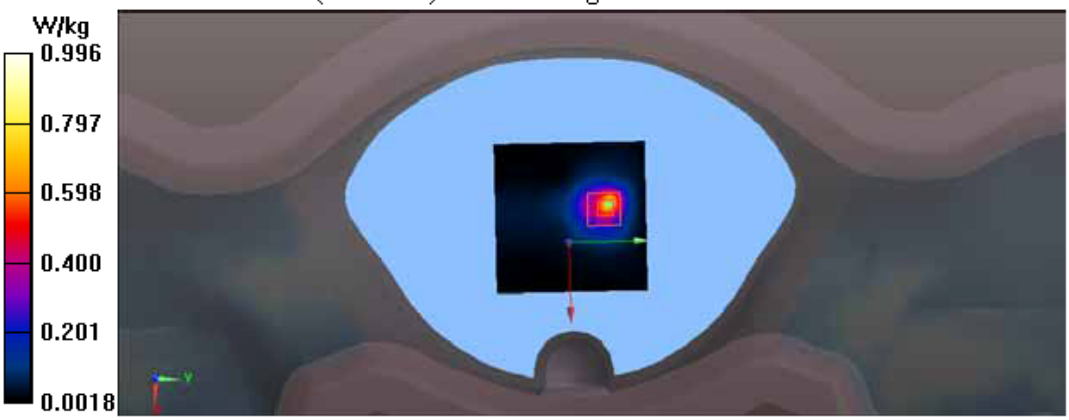
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.511 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.449 W/kg

SAR(1 g) = 0.225 W/kg; SAR(10 g) = 0.131 W/kg

Maximum value of SAR (measured) = 0.996 W/kg



Test Laboratory: Audix SAR Lab Date: 21/12/2015

CH151(5755MHz Top)-mimo ant2

DUT:Tablet PC ; M/N: AT 10-C

Communication System: UID 0, IEEE 802.11n HT40 WiFi 5.8GHz (0); Communication System Band: IEEE 802.11ac VHT40 WiFi 5.8GHz; Frequency: 5755MHz;Communication System PAR: 0 dB.Medium parameters used: f = 5755 MHz; σ = 5.64 S/m; ε_r = 48.73; ρ = 1000 kg/m^3.Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3767; ConvF(4.65, 4.65, 4.65); Calibrated: 30/01/2015;
- Modulation Compensation:
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn899; Calibrated: 07/02/2014
- Phantom: SAM1; Type: SAM; Serial: TP-1543
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/CH151(5755MHz Top)-mimo/Area Scan (51x51x1): Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.122 W/kg

Configuration/CH151(5755MHz Top)-mimo/Zoom Scan (5x5x7)/Cube 0:

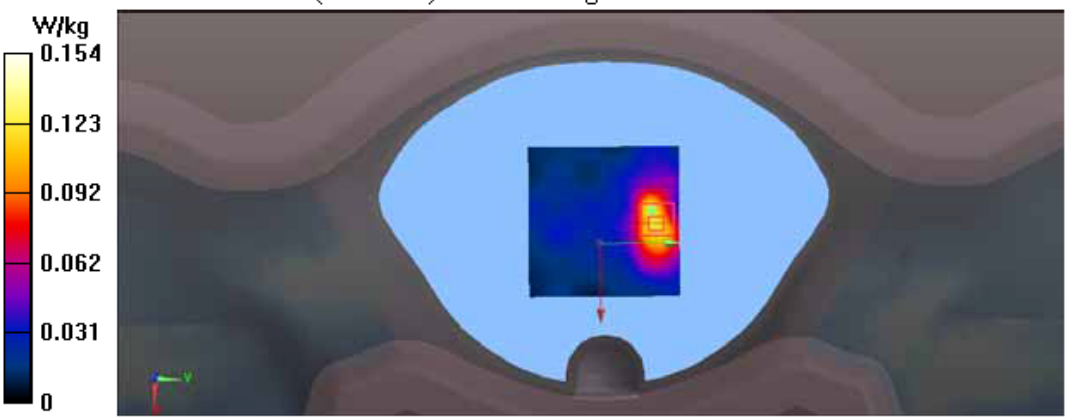
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.204 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.420 W/kg

SAR(1 g) = 0.137 W/kg; SAR(10 g) = 0.053 W/kg

Maximum value of SAR (measured) = 0.154 W/kg



10. ANNEX C: DASY CABLIBRATION CERTIFICATE

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

s p e a g

IMPORTANT NOTICE

USAGE OF THE DAE 4

The DAE unit is a delicate, high precision instrument and requires careful treatment by the user. There are no serviceable parts inside the DAE. Special attention shall be given to the following points:

Battery Exchange: The battery cover of the DAE4 unit is closed using a screw, over tightening the screw may cause the threads inside the DAE to wear out.

Shipping of the DAE: Before shipping the DAE to SPEAG for calibration, remove the batteries and pack the DAE in an antistatic bag. This antistatic bag shall then be packed into a larger box or container which protects the DAE from impacts during transportation. The package shall be marked to indicate that a fragile instrument is inside.

E-Stop Failures: Touch detection may be malfunctioning due to broken magnets in the E-stop. Rough handling of the E-stop may lead to damage of these magnets. Touch and collision errors are often caused by dust and dirt accumulated in the E-stop. To prevent E-stop failure, the customer shall always mount the probe to the DAE carefully and keep the DAE unit in a non-dusty environment if not used for measurements.

Repair: Minor repairs are performed at no extra cost during the annual calibration. However, SPEAG reserves the right to charge for any repair especially if rough unprofessional handling caused the defect.

DASY Configuration Files: Since the exact values of the DAE input resistances, as measured during the calibration procedure of a DAE unit, are not used by the DASY software, a nominal value of 200 MOhm is given in the corresponding configuration file.

Important Note:
Warranty and calibration is void if the DAE unit is disassembled partly or fully by the Customer.

Important Note:
Never attempt to grease or oil the E-stop assembly. Cleaning and readjusting of the E-stop assembly is allowed by certified SPEAG personnel only and is part of the annual calibration procedure.

Important Note:
To prevent damage of the DAE probe connector pins, use great care when installing the probe to the DAE. Carefully connect the probe with the connector notch oriented in the mating position. Avoid any rotational movement of the probe body versus the DAE while turning the locking nut of the connector. The same care shall be used when disconnecting the probe from the DAE.

Schmid & Partner Engineering

TN_BR040315AD DAE4.doc 11.12.2009

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Client: Audix-CN (Auden)

Certificate No: DAE4-899_Feb14

CALIBRATION CERTIFICATE

Object: DAE4 - SD 000 D04 BJ - SN: 899

Calibration procedure(s): QA CAL-06.v26
Calibration procedure for the data acquisition electronics (DAE)

Calibration date: February 07, 2014

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Keithley Multimeter Type 2001	SN: 0810278	01-Oct-13 (No:13976)	Oct-14
Secondary Standards	**ID #**	**Check Date (in house)**	**Scheduled Check**
Auto DAE Calibration Unit	SE UWS 053 AA 1001	07-Jan-14 (in house check)	In house check: Jan-15
Calibrator Box V2.1	SE UMS 006 AA 1002	07-Jan-14 (in house check)	In house check: Jan-15

	Name	Function	Signature
Calibrated by:	Dominique Steffen	Technician	
Approved by:	Fin Bomholt	Deputy Technical Manager	

Issued: February 7, 2014

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Glossary

DAE	data acquisition electronics
Connector angle	information used in DASY system to align probe sensor X to the robot coordinate system.

Methods Applied and Interpretation of Parameters

- *DC Voltage Measurement:* Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- *Connector angle:* The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty.
  - *DC Voltage Measurement Linearity:* Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.
  - *Common mode sensitivity:* Influence of a positive or negative common mode voltage on the differential measurement.
  - *Channel separation:* Influence of a voltage on the neighbor channels not subject to an input voltage.
  - *AD Converter Values with inputs shorted:* Values on the internal AD converter corresponding to zero input voltage
  - *Input Offset Measurement:* Output voltage and statistical results over a large number of zero voltage measurements.
  - *Input Offset Current:* Typical value for information; Maximum channel input offset current, not considering the input resistance.
  - *Input resistance:* Typical value for information; DAE input resistance at the connector, during internal auto-zeroing and during measurement.
  - *Low Battery Alarm Voltage:* Typical value for information. Below this voltage, a battery alarm signal is generated.
  - *Power consumption:* Typical value for information. Supply currents in various operating modes.

DC Voltage Measurement

A/D - Converter Resolution nominal

High Range:	1LSB =	6.1μV ,	full range =	-100...+300 mV
Low Range:	1LSB =	61nV ,	full range =	-1.....+3mV

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	Z
High Range	402.444 ± 0.02% (k=2)	403.022 ± 0.02% (k=2)	403.015 ± 0.02% (k=2)
Low Range	3.97807 ± 1.50% (k=2)	3.97561 ± 1.50% (k=2)	3.98289 ± 1.50% (k=2)

Connector Angle

Connector Angle to be used in DASY system	348.5 ° ± 1 °

Appendix

1. DC Voltage Linearity

High Range		Reading (μV)	Difference (μV)	Error (%)
Channel X	+ Input	200020.74	-12.32	-0.01
Channel X	+ Input	20003.94	0.42	0.00
Channel X	- Input	-20000.65	4.43	-0.02
Channel Y	+ Input	200024.54	-8.07	-0.00
Channel Y	+ Input	20003.50	0.05	0.00
Channel Y	- Input	-20005.35	-0.07	0.00
Channel Z	+ Input	200023.23	-9.62	-0.00
Channel Z	+ Input	20001.41	-2.00	-0.01
Channel Z	- Input	-20003.84	1.48	-0.01

Low Range		Reading (μV)	Difference (μV)	Error (%)
Channel X	+ Input	2000.38	0.01	0.00
Channel X	+ Input	200.71	0.20	0.10
Channel X	- Input	-199.43	0.24	-0.12
Channel Y	+ Input	2000.51	0.18	0.01
Channel Y	+ Input	200.06	-0.37	-0.19
Channel Y	- Input	-200.21	-0.52	0.26
Channel Z	+ Input	2000.02	-0.18	-0.01
Channel Z	+ Input	199.46	-0.87	-0.44
Channel Z	- Input	-201.40	-1.60	0.80

2. Common mode sensitivity

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading (μV)	Low Range Average Reading (μV)
Channel X	200	9.88	7.90
	- 200	-5.85	-7.46
Channel Y	200	13.78	13.66
	- 200	-14.94	-14.95
Channel Z	200	-7.66	-7.63
	- 200	5.58	5.36

3. Channel separation

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X (μV)	Channel Y (μV)	Channel Z (μV)
Channel X	200	-	1.07	-4.97
Channel Y	200	7.56	-	-0.02
Channel Z	200	10.11	6.31	-

4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	16014	16535
Channel Y	15650	17105
Channel Z	15821	16109

5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec
Input 10MΩ

	Average (μV)	min. Offset (μV)	max. Offset (μV)	Std. Deviation (μV)
Channel X	0.61	-0.53	2.08	0.53
Channel Y	0.05	-1.07	0.99	0.45
Channel Z	-0.61	-1.61	0.30	0.40

6. Input Offset Current

Nominal Input circuitry offset current on all channels: <25fA

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200
Channel Z	200	200

8. Low Battery Alarm Voltage (Typical values for information)

Typical values	Alarm Level (VDC)
Supply (+ Vcc)	+7.9
Supply (- Vcc)	-7.6

9. Power Consumption (Typical values for information)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.01	+6	+14
Supply (- Vcc)	-0.01	-8	-9

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E-mail: cttl@chinattl.com Http://www.chinattl.cn

CALIBRATION
No. L0570

Client **Audix** **Certificate No: Z15-97100**

[redacted]

Object	ES3DV3 - SN:3139
Calibration Procedure(s)	FD-Z11-2-004-01 Calibration Procedures for Dosimetric E-field Probes
Calibration date:	August 10, 2015

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)°C and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	101919	01-Jul-15 (CTTL, No.J15X04256)	Jun-16
Power sensor NRP-Z91	101547	01-Jul-15 (CTTL, No.J15X04256)	Jun-16
Power sensor NRP-Z91	101548	01-Jul-15 (CTTL, No.J15X04256)	Jun-16
Reference10dBAttenuator	18N50W-10dB	13-Mar-14(TMC,No.JZ14-1103)	Mar-16
Reference20dBAttenuator	18N50W-20dB	13-Mar-14(TMC,No.JZ14-1104)	Mar-16
Reference Probe EX3DV4	SN 7307	27-Feb-15(SPEAG,No.EX3-7307_Feb15)	Feb-16
DAE4	SN 771	27-Jan-15(SPEAG, No.DAE4-771_Jan15)	Jan -16
Secondary Standards	**ID #**	**Cal Date(Calibrated by, Certificate No.)**	**Scheduled Calibration**
SignalGeneratorMG3700A	6201052605	01-Jul-15 (CTTL, No.J15X04255)	Jun-16
Network Analyzer E5071C	MY46110673	03-Feb-15 (CTTL, No.J15X00728)	Feb-16

	Name	Function	Signature
Calibrated by:	Yu Zongying	SAR Test Engineer	
Reviewed by:	Qi Dianyuan	SAR Project Leader	
Approved by:	Lu Bingsong	Deputy Director of the laboratory	

Issued: August 12, 2015

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Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A,B,C,D	modulation dependent linearization parameters
Polarization Φ	Φ rotation around probe axis
Polarization θ	θ rotation around an axis that is in the plane normal to probe axis (at measurement center), i θ=0 is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013

b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300MHz to 3GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization θ=0 (f≤900MHz in TEM-cell; f>1800MHz: waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below ConvF).
- *NORM(f)x,y,z = NORMx,y,z* frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics.
- *Ax,y,z; Bx,y,z; Cx,y,z;VRx,y,z:*A,B,C are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f≤800MHz) and inside waveguide using analytical field distributions based on power measurements for f >800MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty valued are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from±50MHz to±100MHz.
- *Spherical isotropy (3D deviation from isotropy):* in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset:* The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- *Connector Angle:* The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).

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Probe ES3DV3

SN: 3139

Calibrated: August 10, 2015

Calibrated for DASY/EASY Systems

(Note: non-compatible with DASY2 system!)

Certificate No: Z15-97100 Page 3 of 11

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DASY/EASY – Parameters of Probe: ES3DV3 - SN: 3139

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm(μV/(V/m)²)[A]	1.28	1.32	1.32	±10.8%
DCP(mV)[B]	104.0	101.8	101.8	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB√μV	C	D dB	V mV	Unc[E] (k=2)
0	CW	X	0.0	0.0	1.0	0.00	263.6	±2.3%
		Y	0.0	0.0	1.0		269.1	
		Z	0.0	0.0	1.0		268.3	

The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor k=2, which for a normal distribution Corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of Norm X, Y, Z do not affect the E^2-field uncertainty inside TSL (see Page 5 and Page 6).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainly is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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DASY/EASY – Parameters of Probe: ES3DV3 - SN: 3139

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz][C]	Relative Permittivity[F]	Conductivity (S/m)[F]	ConvF X	ConvF Y	ConvF Z	Alpha[G]	Depth[G] (mm)	Unct. (k=2)
850	41.5	0.92	5.97	5.97	5.97	0.34	1.60	±12%
900	41.5	0.97	5.86	5.86	5.86	0.36	1.58	±12%
1810	40.0	1.40	4.74	4.74	4.74	0.37	1.71	±12%
2000	40.0	1.40	4.81	4.81	4.81	0.33	1.94	±12%
2450	39.2	1.80	4.36	4.36	4.36	0.73	1.18	±12%

[C] Frequency validity of ±100MHz only applies for DASY v4.4 and higher (Page 2), else it is restricted to ±50MHz. The uncertainty is the RSS of ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

[F] At frequency below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ±5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for the frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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DASY/EASY – Parameters of Probe: ES3DV3 - SN: 3139

Calibration Parameter Determined in Body Tissue Simulating Media

f [MHz][C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha[G]	Depth[G] (mm)	Unct. (k=2)
850	55.2	0.99	5.93	5.93	5.93	0.36	1.61	±12%
900	55.0	1.05	5.75	5.75	5.75	0.43	1.50	±12%
1810	53.3	1.52	4.49	4.49	4.49	0.36	1.86	±12%
2000	53.3	1.52	4.44	4.44	4.44	0.45	1.66	±12%
2450	52.7	1.95	4.01	4.01	4.01	0.48	1.81	±12%

[C] Frequency validity of ±100MHz only applies for DASY v4.4 and higher (Page 2), else it is restricted to ±50MHz. The uncertainty is the RSS of ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

[F] At frequency below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ±5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for the frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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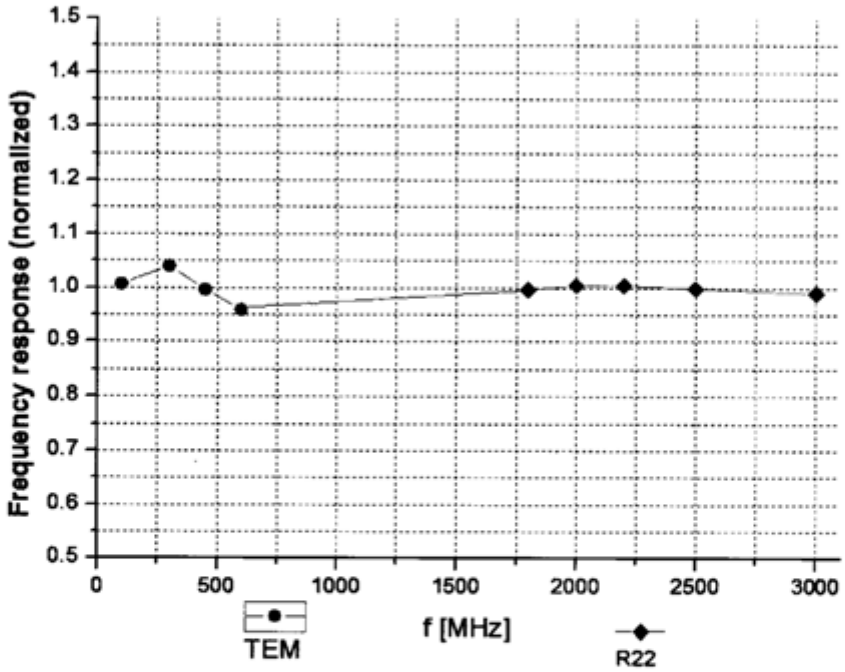
Frequency Response of E-Field
(TEM-Cell: ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ±7.5% (k=2)

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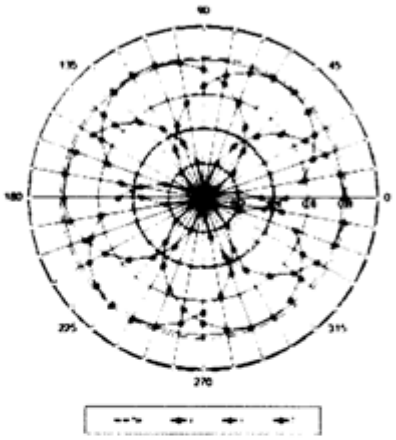
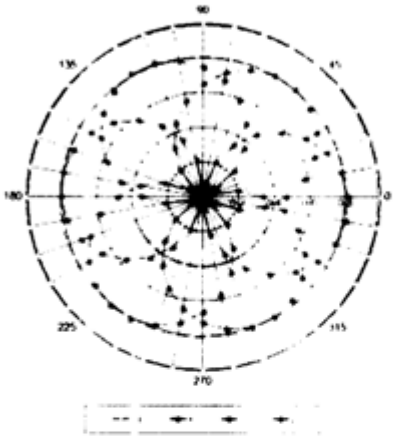
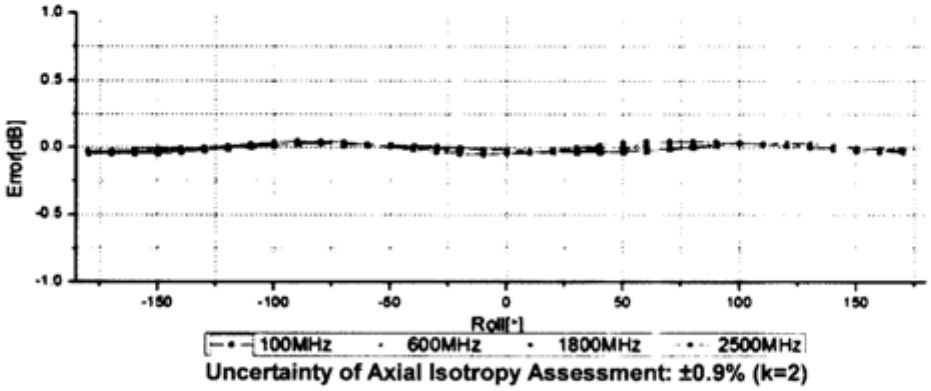
Receiving Pattern (Φ), θ=0°

f=600 MHz, TEM



f=1800 MHz, R22





Uncertainty of Axial Isotropy Assessment: ±0.9% (k=2)

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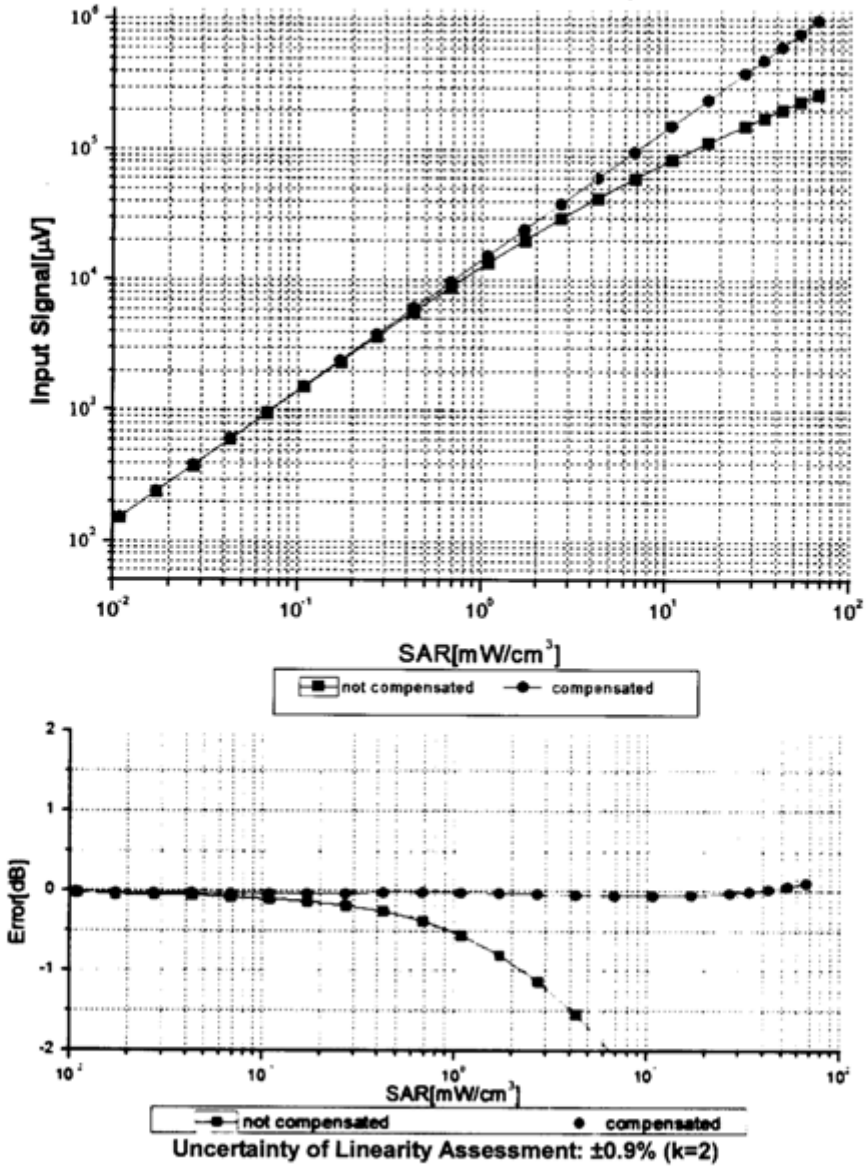
Dynamic Range f(SAR$_{head}$)
(TEM cell, f = 900 MHz)



Uncertainty of Linearity Assessment: ±0.9% (k=2)

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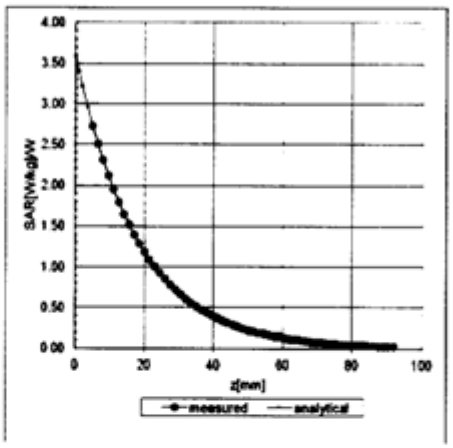
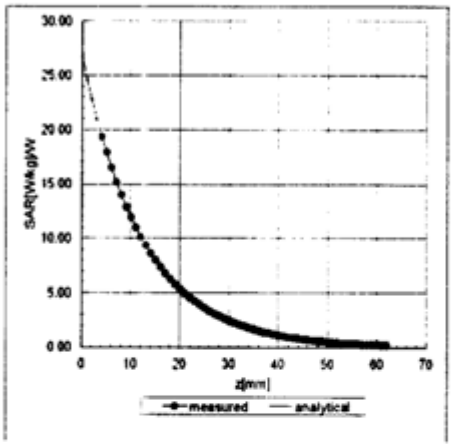
Conversion Factor Assessment

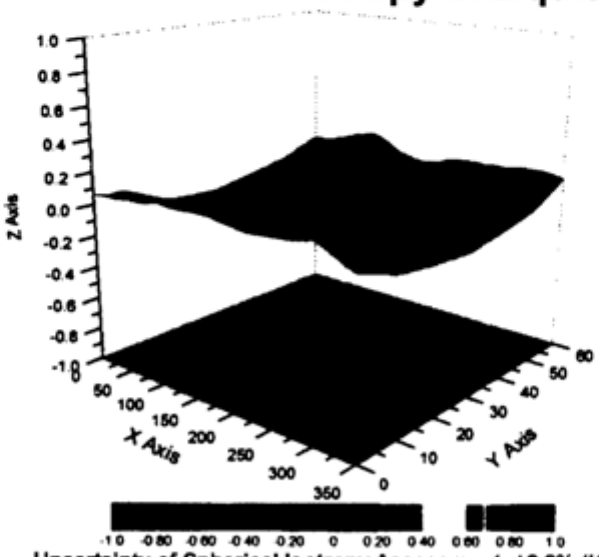
f=900 MHz, WGLS R9(H_convF)



f=1810 MHz, WGLS R22(H_convF)



Deviation from Isotropy in Liquid



Uncertainty of Spherical Isotropy Assessment: ±2.8% (K=2)

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DASY/EASY – Parameters of Probe: ES3DV3 - SN: 3139

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	90.2
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disable
Probe Overall Length	337mm
Probe Body Diameter	10mm
Tip Length	10mm
Tip Diameter	4mm
Probe Tip to Sensor X Calibration Point	2mm
Probe Tip to Sensor Y Calibration Point	2mm
Probe Tip to Sensor Z Calibration Point	2mm
Recommended Measurement Distance from Surface	3mm

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CALIBRATION No. L0570

Client Audix Certificate No: Z15-97001

CALIBRATION CERTIFICATE

Object EX3DV4 - SN:3767

Calibration Procedure(s) FD-Z11-2-004-01
Calibration Procedures for Dosimetric E-field Probes

Calibration date: January 30, 2015

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)℃ and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	101919	01-Jul-14 (CTTL, No.J14X02146)	Jun-15
Power sensor NRP-Z91	101547	01-Jul-14 (CTTL, No.J14X02146)	Jun-15
Power sensor NRP-Z91	101548	01-Jul-14 (CTTL, No.J14X02146)	Jun-15
Reference10dBAttenuator	18N50W-10dB	13-Mar-14(TMC,No.JZ14-1103)	Mar-16
Reference20dBAttenuator	18N50W-20dB	13-Mar-14(TMC,No.JZ14-1104)	Mar-16
Reference Probe EX3DV4	SN 3617	28-Aug-14(SPEAG,No.EX3-3617_Aug14)	Aug-15
DAE4	SN 777	17-Sep-14 (SPEAG, DAE4-777_Sep14)	Sep -15
Secondary Standards	**ID #**	**Cal Date(Calibrated by, Certificate No.)**	**Scheduled Calibration**
SignalGeneratorMG3700A	6201052605	01-Jul-14 (CTTL, No.J14X02145)	Jun-15
Network Analyzer E5071C	MY46110673	15-Feb-14 (TMC, No.JZ14-781)	Feb-15

	Name	Function	Signature
Calibrated by:	Yu Zongying	SAR Test Engineer	
Reviewed by:	Qi Dianyuan	SAR Project Leader	
Approved by:	Lu Bingsong	Deputy Director of the laboratory	

Issued: January 31, 2015

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Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A,B,C,D	modulation dependent linearization parameters
Polarization Φ	Φ rotation around probe axis
Polarization θ	θ rotation around an axis that is in the plane normal to probe axis (at measurement center), i θ=0 is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013

b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300MHz to 3GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization θ=0 (f≤900MHz in TEM-cell; f>1800MHz: waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below ConvF).
- *NORM(f)x,y,z = NORMx,y,z* frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics.
- *Ax,y,z; Bx,y,z; Cx,y,z;VRx,y,z:*A,B,C are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f≤800MHz) and inside waveguide using analytical field distributions based on power measurements for f >800MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty valued are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from±50MHz to±100MHz.
- *Spherical isotropy (3D deviation from isotropy):* in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset:* The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- *Connector Angle:* The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).

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Probe EX3DV4

SN: 3767

Calibrated: January 30, 2015

Calibrated for DASY/EASY Systems

(Note: non-compatible with DASY2 system!)

Certificate No: Z15-97001 Page 3 of 11

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DASY/EASY – Parameters of Probe: EX3DV4 – SN: 3767

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm(μV/(V/m)^2)^A	0.56	0.57	0.47	±10.8%
DCP(mV)^B	102.2	97.8	103.3	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Unc^E (k=2)
0	CW	X	0.0	0.0	1.0	0.00	202.6	±3.3%
		Y	0.0	0.0	1.0		204.8	
		Z	0.0	0.0	1.0		187.8	

The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor k=2, which for a normal distribution Corresponds to a coverage probability of approximately 95%.

^{A} The uncertainties of Norm X, Y, Z do not affect the E^2-field uncertainty inside TSL (see Page 5 and Page 6).
^{B} Numerical linearization parameter: uncertainty not required.
^{E} Uncertainly is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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DASY/EASY – Parameters of Probe: EX3DV4 – SN: 3767

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz][C]	Relative Permittivity[F]	Conductivity (S/m)[F]	ConvF X	ConvF Y	ConvF Z	Alpha[G]	Depth[G] (mm)	Unct. (k=2)
750	41.9	0.89	9.79	9.79	9.79	0.22	0.99	±12%
835	41.5	0.90	9.27	9.27	9.27	0.14	1.33	±12%
900	41.5	0.97	9.13	9.13	9.13	0.16	1.22	±12%
1450	40.5	1.20	8.77	8.77	8.77	0.58	0.70	±12%
1750	40.1	1.37	8.20	8.20	8.20	0.25	0.98	±12%
1900	40.0	1.40	7.91	7.91	7.91	0.17	1.30	±12%
2000	40.0	1.40	7.65	7.65	7.65	0.15	1.80	±12%
2450	39.2	1.80	7.18	7.18	7.18	0.53	0.71	±12%
2600	39.0	1.96	7.02	7.02	7.02	0.69	0.63	±12%
5200	36.0	4.66	5.44	5.44	5.44	0.50	1.00	±13%
5300	35.9	4.76	5.09	5.09	5.09	0.43	1.08	±13%
5500	35.6	4.96	4.83	4.83	4.83	0.55	1.03	±13%
5600	35.5	5.07	4.73	4.73	4.73	0.52	1.09	±13%
5800	35.3	5.27	4.65	4.65	4.65	0.50	1.15	±13%

[C] Frequency validity of ±100MHz only applies for DASY v4.4 and higher (Page 2), else it is restricted to ±50MHz. The uncertainty is the RSS of ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequency below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ±5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.
[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for the frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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DASY/EASY – Parameters of Probe: EX3DV4 – SN: 3767

Calibration Parameter Determined in Body Tissue Simulating Media

f [MHz][C]	Relative Permittivity[F]	Conductivity (S/m)[F]	ConvF X	ConvF Y	ConvF Z	Alpha[G]	Depth[G] (mm)	Unct. (k=2)
750	55.5	0.96	9.67	9.67	9.67	0.15	1.46	±12%
835	55.2	0.97	9.66	9.66	9.66	0.18	1.35	±12%
900	55.0	1.05	9.32	9.32	9.32	0.22	1.15	±12%
1450	54.0	1.30	8.22	8.22	8.22	0.11	1.61	±12%
1750	53.4	1.49	7.77	7.77	7.77	0.12	1.87	±12%
1900	53.3	1.52	7.58	7.58	7.58	0.17	1.39	±12%
2000	53.3	1.52	7.80	7.80	7.80	0.14	1.99	±12%
2450	52.7	1.95	7.35	7.35	7.35	0.31	1.19	±12%
2600	52.5	2.16	7.26	7.26	7.26	0.36	1.00	±12%
5200	49.0	5.30	4.98	4.98	4.98	0.52	1.08	±13%
5300	48.9	5.42	4.73	4.73	4.73	0.56	1.00	±13%
5500	48.6	5.65	4.35	4.35	4.35	0.52	1.26	±13%
5600	48.5	5.77	4.25	4.25	4.25	0.56	1.27	±13%
5800	48.2	6.00	4.33	4.33	4.33	0.44	1.28	±13%

[C] Frequency validity of ±100MHz only applies for DASY v4.4 and higher (Page 2), else it is restricted to ±50MHz. The uncertainty is the RSS of ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequency below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ±5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.
[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for the frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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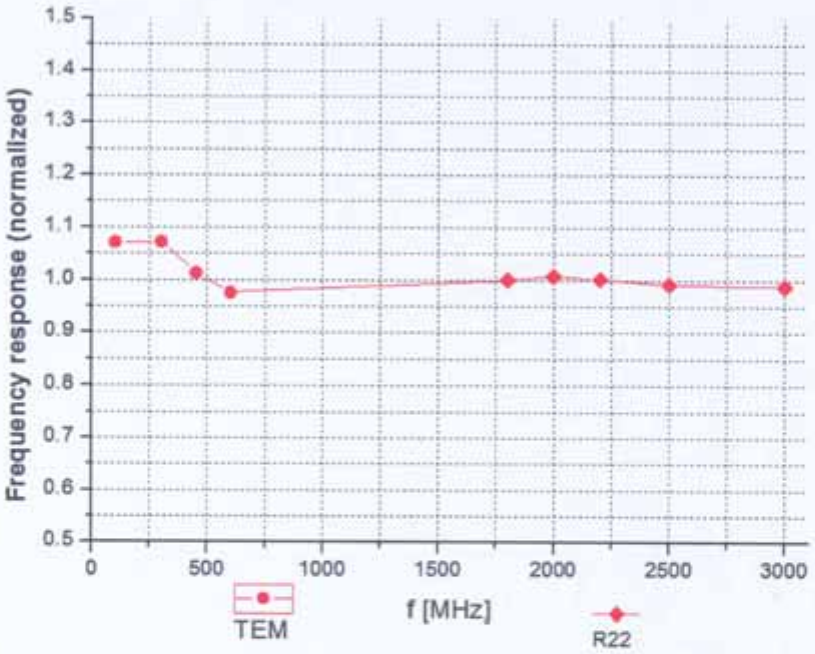
Frequency Response of E-Field
(TEM-Cell: ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ±7.5% (k=2)

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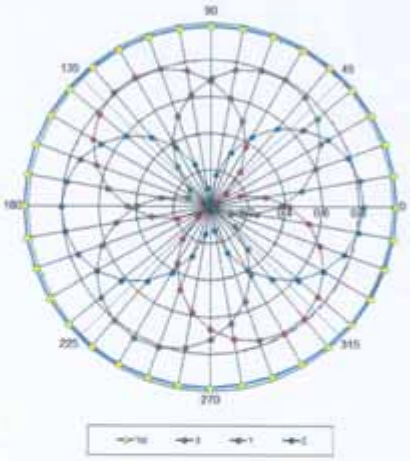
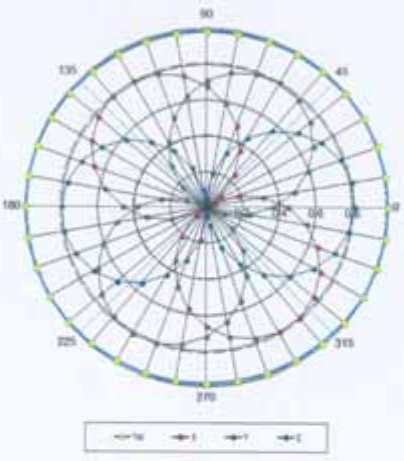
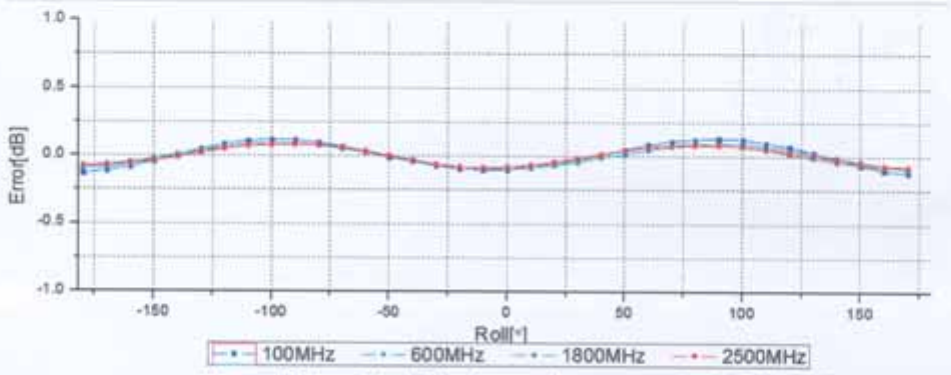
Receiving Pattern (Φ), θ=0°

f=600 MHz, TEM



f=1800 MHz, R22





Uncertainty of Axial Isotropy Assessment: ±0.9% (k=2)

Certificate No: Z15-97001 Page 8 of 11

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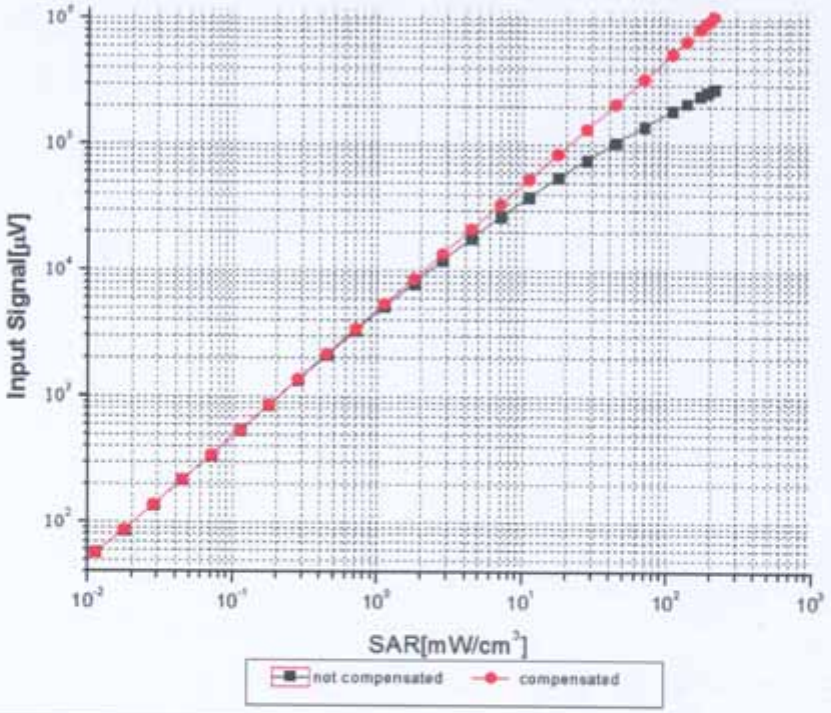
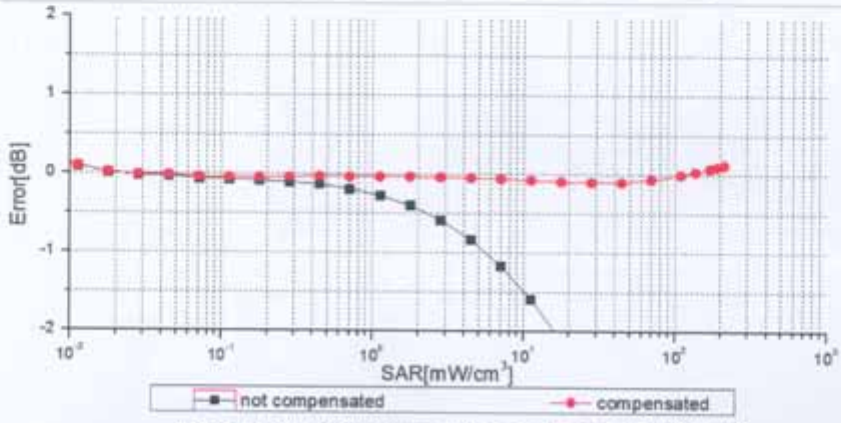
Dynamic Range f(SAR_{head})
(TEM cell, f = 900 MHz)





Uncertainty of Linearity Assessment: ±0.9% (k=2)

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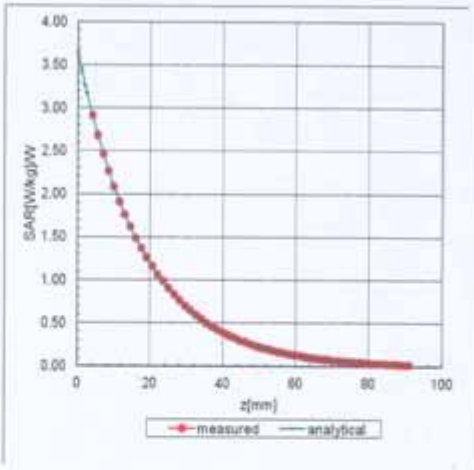
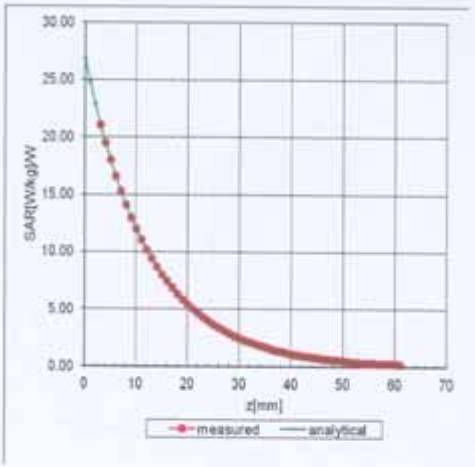
Conversion Factor Assessment

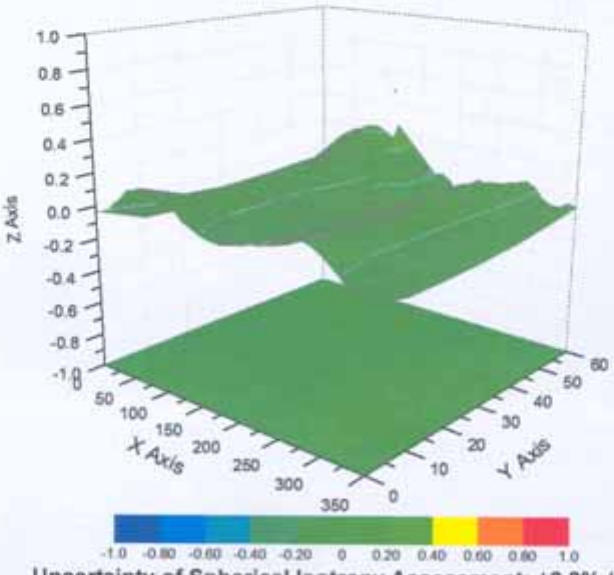
f=900 MHz, WGLS R9(H_convF)



f=1750 MHz, WGLS R22(H_convF)



Deviation from Isotropy in Liquid



Uncertainty of Spherical Isotropy Assessment: ±2.8% (K=2)

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DASY/EASY – Parameters of Probe: EX3DV4 – SN: 3767

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	145.7
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disable
Probe Overall Length	337mm
Probe Body Diameter	10mm
Tip Length	9mm
Tip Diameter	2.5mm
Probe Tip to Sensor X Calibration Point	1mm
Probe Tip to Sensor Y Calibration Point	1mm
Probe Tip to Sensor Z Calibration Point	1mm
Recommended Measurement Distance from Surface	1.4mm

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Client Auden Certificate No: Z14-97048

CALIBRATION CERTIFICATE

Object	D2450V2 - SN: 882
Calibration Procedure(s)	TMC-OS-E-02-194 Calibration procedure for dipole validation kits
Calibration date:	May 29, 2014

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)℃ and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRVD	102083	11-Sep-13 (TMC, No.JZ13-443)	Sep-14
Power sensor NRV-Z5	100595	11-Sep-13 (TMC, No. JZ13-443)	Sep -14
Reference Probe EX3DV4	SN 3846	3- Sep-13 (SPEAG, No.EX3-3846_Sep13)	Sep-14
DAE4	SN 1331	23-Jan-14 (SPEAG, DAE4-1331_Jan14)	Jan -15
Signal Generator E4438C	MY49070393	13-Nov-13 (TMC, No.JZ13-394)	Nov-14
Network Analyzer E8362B	MY43021135	19-Oct-13 (TMC, No.JZ13-278)	Oct-14

	Name	Function	Signature
Calibrated by:	Yu Zongying	SAR Test Engineer	
Reviewed by:	Qi Dianyuan	SAR Project Leader	
Approved by:	Lu Bingsong	Deputy Director of the laboratory	

Issued: May 30, 2014

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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORMx,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013

b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) For hand-held devices used in close proximity to the ear (frequency range of 300MHz to 3GHz)", February 2005

c) KDB865664, SAR Measurement Requirements for 100 MHz to 6 GHz

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions*: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL*: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss*: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay*: One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured*: SAR measured at the stated antenna input power.
- *SAR normalized*: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters*: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor k=2, which for a normal distribution Corresponds to a coverage probability of approximately 95%.

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Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	52.8.8.1222
Extrapolation	Advanced Extrapolation	
Phantom	Twin Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2450 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.8 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.5 ± 6 %	1.82 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	—	—

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.4 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**53.1 mW /g ± 20.8 % (k=2)**
SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	6.35 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**25.3 mW /g ± 20.4 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	52.2 ± 6 %	1.94 mho/m ± 6 %
Body TSL temperature change during test	<1.0 °C	—	—

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	12.6 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**50.4 mW /g ± 20.8 % (k=2)**
SAR averaged over 10 cm^3 (10 g) of Body TSL	Condition	
SAR measured	250 mW input power	5.99 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**24.0 mW /g ± 20.4 % (k=2)**

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Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	48.6Ω- 6.07jΩ
Return Loss	- 24.0dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	52.1Ω- 6.08jΩ
Return Loss	- 24.0dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.346 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG

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DASY5 Validation Report for Head TSL Date: 27.05.2014

Test Laboratory: TMC, Beijing, China

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN: 862

Communication System: UID 0, CW; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2450 MHz; σ = 1.819 S/m; ε_r = 38.51; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3846; ConvF(6.78, 6.78, 6.78); Calibrated: 2013-09-03;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2014-01-23
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: xxxx
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

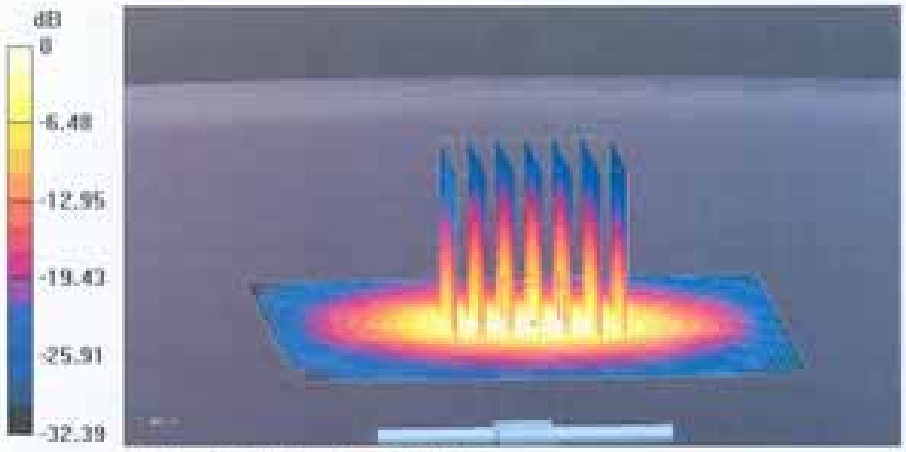
System Performance Check at Frequencies above 1 GHz/d=10mm, Pin=xx mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 106.6 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 26.8 W/kg

SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.35 W/kg

Maximum value of SAR (measured) = 20.1 W/kg



0 dB = 19.6 W/kg = 12.93 dBW/kg

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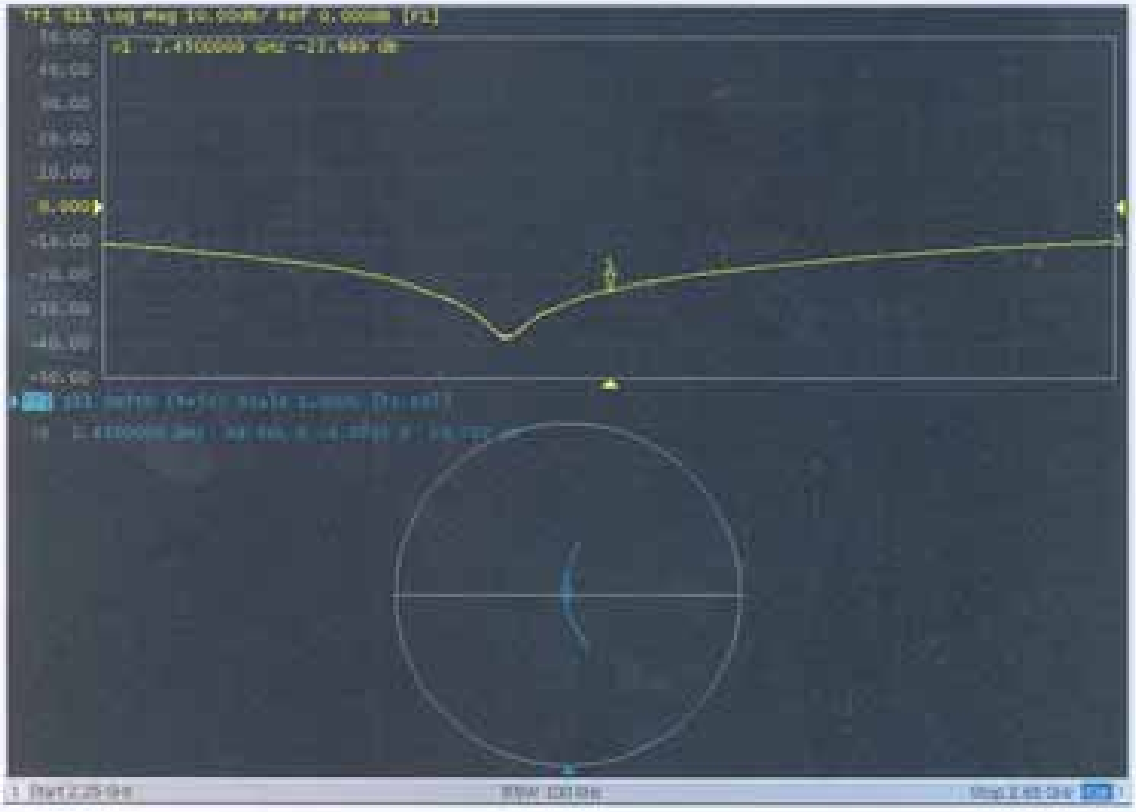
Impedance Measurement Plot for Head TSL



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DASY5 Validation Report for Body TSL Date: 28.05.2014

Test Laboratory: TMC, Beijing, China

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN: 862

Communication System: UID 0, CW; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2450 MHz; σ = 1.94 S/m; ε_r = 52.5; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3846; ConvF(6.73, 6.73, 6.73); Calibrated: 2013-09-03;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2014-01-23
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: xxxx
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

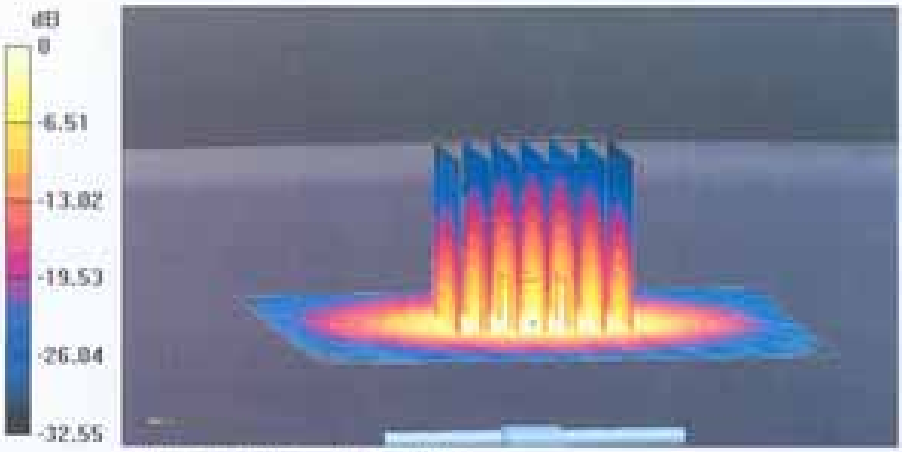
System Performance Check at Frequencies above 1 GHz/d=10mm, Pin=xx mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 99.55 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 25.2 W/kg

SAR(1 g) = 12.6 W/kg; SAR(10 g) = 5.99 W/kg

Maximum value of SAR (measured) = 19.0 W/kg



0 dB = 18.1 W/kg = 12.58 dBW/kg

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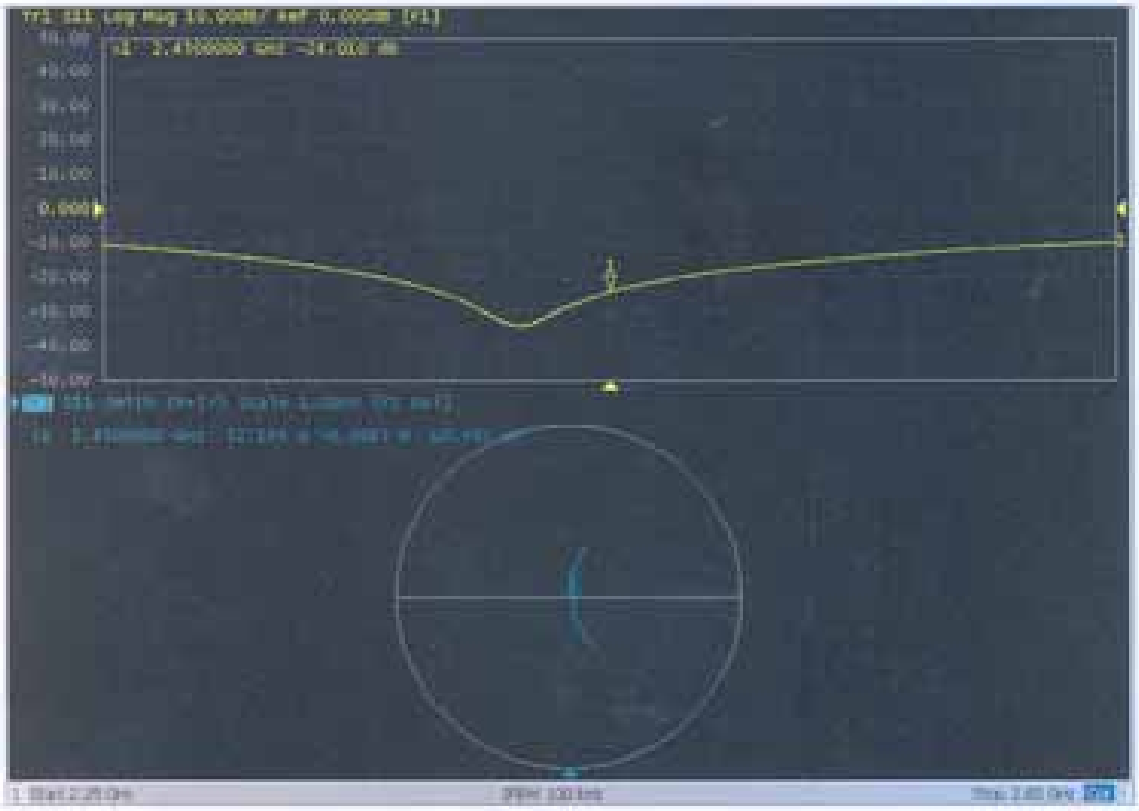
Impedance Measurement Plot for Body TSL



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Client Auden Certificate No: Z14-97049

CALIBRATION CERTIFICATE

Object D5GHzV2 - SN:1102

Calibration Procedure(s) TMC-OS-E-02-194
Calibration procedure for dipole validation kits

Calibration date: June 16, 2014

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)℃ and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRVD	102083	11-Sep-13 (TMC, No.JZ13-443)	Sep-14
Power sensor NRV-Z5	100595	11-Sep-13 (TMC, No. JZ13-443)	Sep -14
Reference Probe EX3DV4	SN 3846	3- Sep-13 (SPEAG, No.EX3-3846_Sep13)	Sep-14
DAE4	SN 1331	23-Jan-14 (SPEAG, DAE4-1331_Jan14)	Jan -15
Signal Generator E4438C	MY49070393	13-Nov-13 (TMC, No.JZ13-394)	Nov-14
Network Analyzer E8362B	MY43021135	19-Oct-13 (TMC, No.JZ13-278)	Oct-14

	Name	Function	Signature
Calibrated by:	Yu Zongying	SAR Test Engineer	
Reviewed by:	Qi Dianyuan	SAR Project Leader	
Approved by:	Lu Bingsong	Deputy Director of the laboratory	

Issued: June 17, 2014

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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORMx,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) For hand-held devices used in close proximity to the ear (frequency range of 300MHz to 3GHz)", February 2005
c) KDB865664, SAR Measurement Requirements for 100 MHz to 6 GHz

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor k=2, which for a normal distribution Corresponds to a coverage probability of approximately 95%.

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Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	52.8.8.1222
Extrapolation	Advanced Extrapolation	
Phantom	Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy = 4.0 mm, dz = 1.4 mm	
Frequency	5200 MHz ± 1 MHz 5500 MHz ± 1 MHz 5800 MHz ± 1 MHz	

Head TSL parameters at 5200MHz

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	36.0	4.66 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	36.3 ± 6 %	4.62 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL at 5200MHz

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	7.81 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**78.2 mW /g ± 23.0 % (k=2)**
SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.23 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**22.3 mW /g ± 22.2 % (k=2)**

Head TSL parameters at 5500MHz

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	35.6	4.96 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.2 ± 6 %	5.04 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL at 5500MHz

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	8.30 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**82.9 mW /g ± 23.0 % (k=2)**
SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.38 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**23.8 mW /g ± 22.2 % (k=2)**

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Head TSL parameters at 5800MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.3	5.27 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	34.9 ± 6 %	5.28 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL at 5800MHz

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	7.57 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**75.5 mW /g ± 23.0 % (k=2)**
SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.15 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**21.4 mW /g ± 22.2 % (k=2)**

Body TSL parameters at 5200MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	49.0	5.30 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	48.1 ± 6 %	5.32 mho/m ± 6 %
Body TSL temperature change during test	<1.0 °C	----	----

SAR result with Body TSL at 5200MHz

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	7.55 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**75.2 mW /g ± 23.0 % (k=2)**
SAR averaged over 10 cm^3 (10 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.18 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**21.7 mW /g ± 22.2 % (k=2)**

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Body TSL parameters at 5500MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.6	5.65 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	47.5 ± 6 %	5.62 mho/m ± 6 %
Body TSL temperature change during test	<1.0 °C	----	----

SAR result with Body TSL at 5500MHz

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	8.05 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**80.1 mW /g ± 23.0 % (k=2)**
SAR averaged over 10 cm^3 (10 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.30 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**22.9 mW /g ± 22.2 % (k=2)**

Body TSL parameters at 5800MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.2	6.00 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	47.2 ± 6 %	6.05 mho/m ± 6 %
Body TSL temperature change during test	<1.0 °C	----	----

SAR result with Body TSL at 5800MHz

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	7.23 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**72.0 mW /g ± 23.0 % (k=2)**
SAR averaged over 10 cm^3 (10 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.05 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**20.4 mW /g ± 22.2 % (k=2)**

Appendix

Antenna Parameters with Head TSL at 5200MHz

Impedance, transformed to feed point	50.2Ω-8.19jΩ
Return Loss	- 21.8dB

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Antenna Parameters with Head TSL at 5500MHz

Impedance, transformed to feed point	52.0Ω- 4.65jΩ
Return Loss	- 26.0dB

Antenna Parameters with Head TSL at 5800MHz

Impedance, transformed to feed point	54.7Ω- 1.58jΩ
Return Loss	- 26.5dB

Antenna Parameters with Body TSL at 5200MHz

Impedance, transformed to feed point	51.6Ω- 7.57jΩ
Return Loss	- 22.4dB

Antenna Parameters with Body TSL at 5500MHz

Impedance, transformed to feed point	51.1Ω- 5.61jΩ
Return Loss	- 25.0dB

Antenna Parameters with Body TSL at 5800MHz

Impedance, transformed to feed point	54.5Ω- 0.89jΩ
Return Loss	- 27.2dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.183 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

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DASY5 Validation Report for Head TSL Date: 16.06.2014

Test Laboratory: TMC, Beijing, China

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1102

Communication System: UID 0, CW; Frequency: 5200 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5200 MHz; σ = 4.62 S/m; ε_r = 36.3; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3846; ConvF(5.25, 5.25, 5.25); Calibrated: 2013-09-03;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2014-01-23
- Phantom: ELI 4.0; Type: QDOVA001BA
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

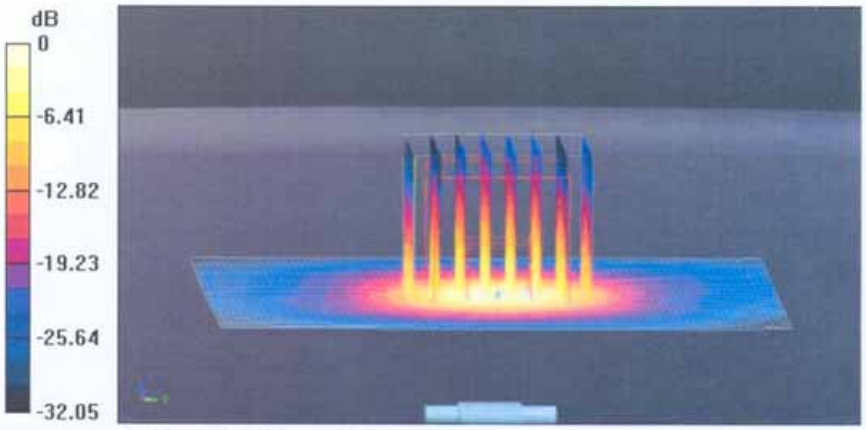
System Performance Check with D5GHzV2 Dipole (graded grid)/d=10mm, Pin=100mW, f=5200 MHz/Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 69.42 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 36.0 W/kg

SAR(1 g) = 7.81 W/kg; SAR(10 g) = 2.23 W/kg

Maximum value of SAR (measured) = 18.5 W/kg



0 dB = 19.1 W/kg = 12.81 dBW/kg

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DASY5 Validation Report for Head TSL Date: 16.06.2014

Test Laboratory: TMC, Beijing, China

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1102

Communication System: UID 0, CW; Frequency: 5500 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5500 MHz; σ = 5.04 S/m; ε_r = 35.2; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3846; ConvF(4.8, 4.8, 4.8); Calibrated: 2013-09-03;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2014-01-23
- Phantom: ELI 4.0; Type: QDOVA001BA
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

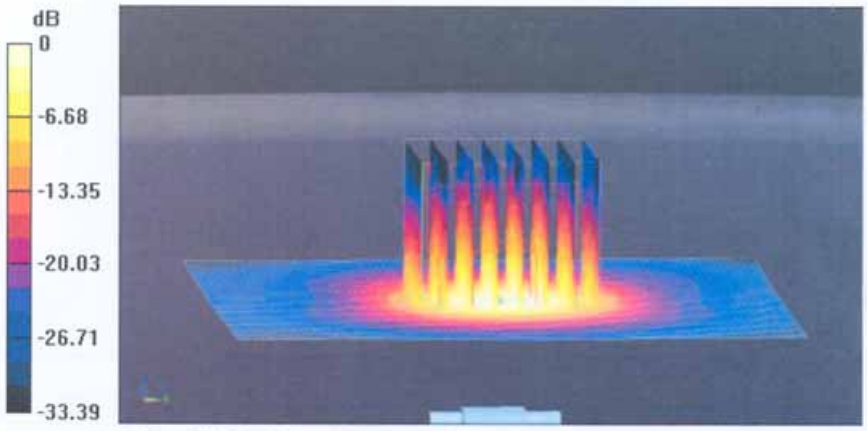
System Performance Check with D5GHzV2 Dipole (graded grid)/d=10mm, Pin=100mW, f=5500 MHz/Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 69.93 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 40.2 W/kg

SAR(1 g) = 8.3 W/kg; SAR(10 g) = 2.38 W/kg

Maximum value of SAR (measured) = 20.5 W/kg



0 dB = 20.5 W/kg = 13.13 dBW/kg

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DASY5 Validation Report for Head TSL Date: 16.06.2014

Test Laboratory: TMC, Beijing, China

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1102

Communication System: UID 0, CW; Frequency: 5800 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5800 MHz; σ = 5.28 S/m; ε_r = 34.9; ρ = 1000 kg/m^3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3846; ConvF(4.51, 4.51, 4.51); Calibrated: 2013-09-03;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2014-01-23
- Phantom: ELI 4.0; Type: QDOVA001BA
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

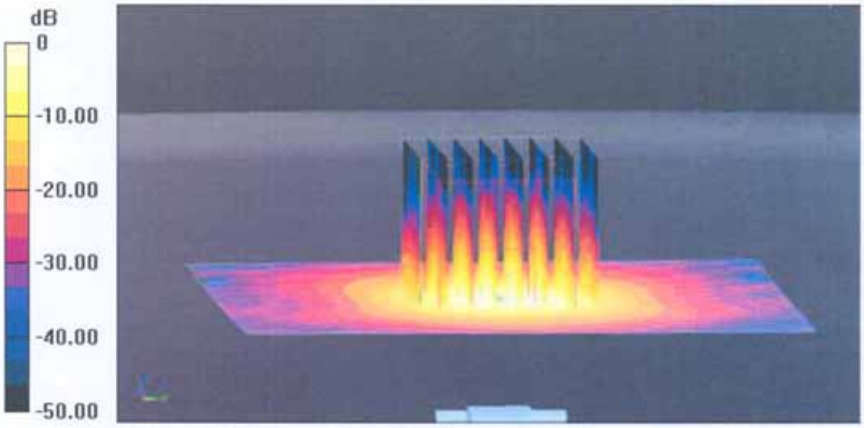
System Performance Check with D5GHzV2 Dipole (graded grid)/d=10mm, Pin=100mW, f=5800 MHz/Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 66.33 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 37.9 W/kg

SAR(1 g) = 7.57 W/kg; SAR(10 g) = 2.15 W/kg

Maximum value of SAR (measured) = 19.2 W/kg



0 dB = 18.9 W/kg = 12.77 dBW/kg

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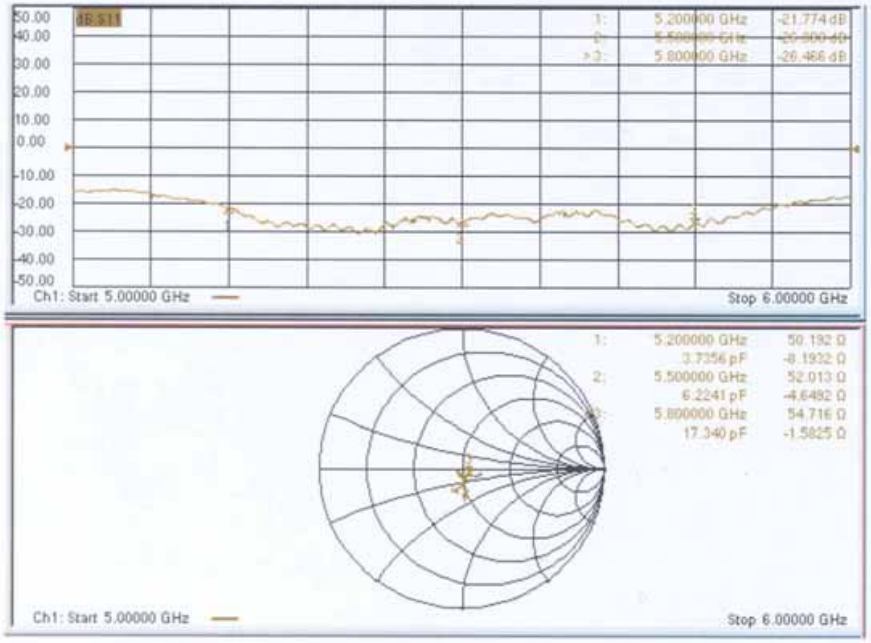
Impedance Measurement Plot for Head TSL



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DASY5 Validation Report for Body TSL Date: 13.06.2014

Test Laboratory: TMC, Beijing, China

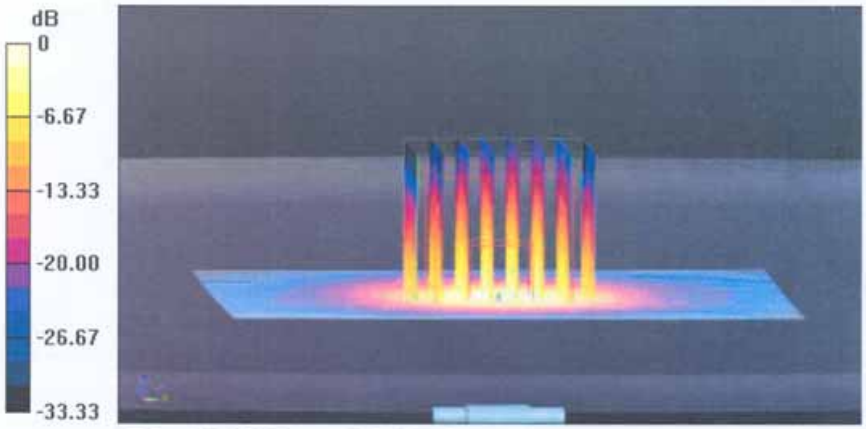
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1102

Communication System: UID 0, CW; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5200 MHz; σ = 5.32 S/m; ε_r = 48.1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3846; ConvF(4.36, 4.36, 4.36); Calibrated: 2013-09-03;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2014-01-23
- Phantom: ELI 4.0; Type: QDOVA001BA
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check with D5GHzV2 Dipole (graded grid)/d=10mm, Pin=100mW, f=5200 MHz/Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 65.52 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 29.4 W/kg
SAR(1 g) = 7.55 W/kg; SAR(10 g) = 2.18 W/kg
Maximum value of SAR (measured) = 17.2 W/kg



0 dB = 17.3 W/kg = 12.38 dBW/kg

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DASY5 Validation Report for Body TSL Date: 13.06.2014

Test Laboratory: TMC, Beijing, China

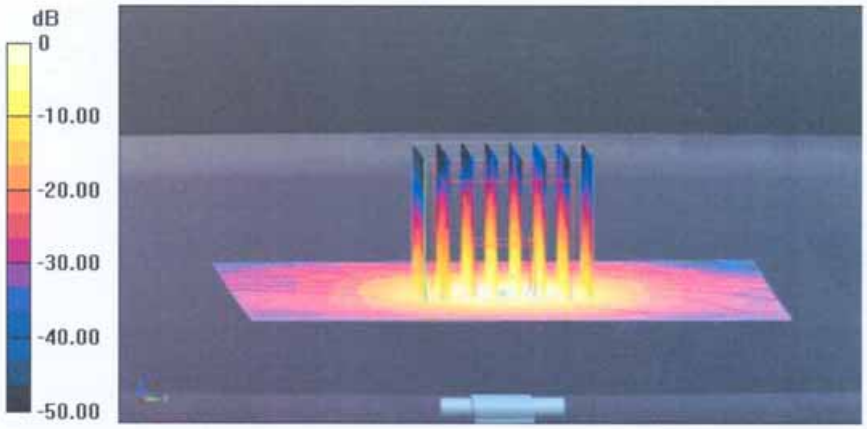
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1102

Communication System: UID 0, CW; Frequency: 5500 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5500 MHz; σ = 5.62 S/m; ε_r = 47.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3846; ConvF(3.81, 3.81, 3.81); Calibrated: 2013-09-03;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2014-01-23
- Phantom: ELI 4.0; Type: QDOVA001BA
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check with D5GHzV2 Dipole (graded grid)/d=10mm, Pin=100mW, f=5500 MHz/Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 68.16 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 33.5 W/kg
SAR(1 g) = 8.05 W/kg; SAR(10 g) = 2.3 W/kg
Maximum value of SAR (measured) = 18.8 W/kg



0 dB = 18.9 W/kg = 12.76 dBW/kg

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DASY5 Validation Report for Body TSL Date: 13.06.2014

Test Laboratory: TMC, Beijing, China

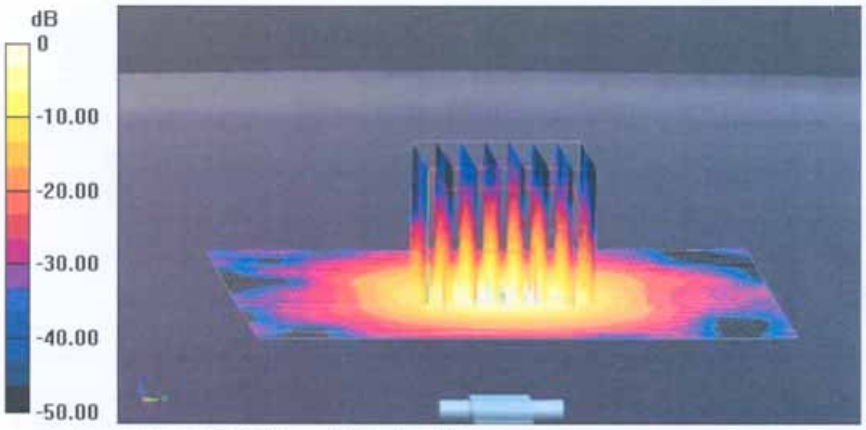
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1102

Communication System: UID 0, CW; Frequency: 5800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5800 MHz; σ = 6.05 S/m; ε_r = 47.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3846; ConvF(3.94, 3.94, 3.94); Calibrated: 2013-09-03;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2014-01-23
- Phantom: ELI 4.0; Type: QDOVA001BA
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check with D5GHzV2 Dipole (graded grid)/d=10mm, Pin=100mW, f=5800 MHz/Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 63.52 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 33.4 W/kg
SAR(1 g) = 7.23 W/kg; SAR(10 g) = 2.05 W/kg
Maximum value of SAR (measured) = 17.4 W/kg



0 dB = 17.6 W/kg = 12.45 dBW/kg

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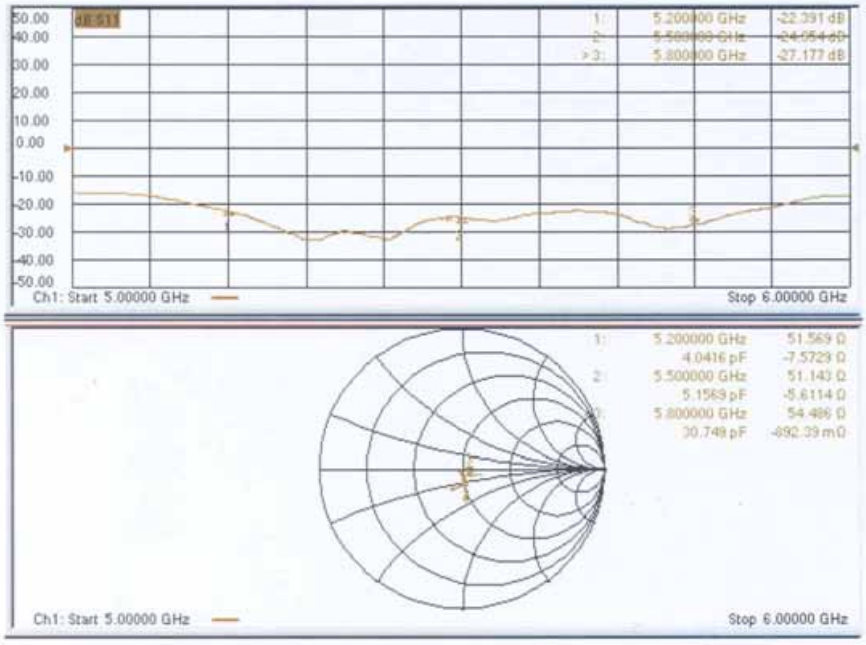
Impedance Measurement Plot for Body TSL



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