Date/Time: 03/24/2014 08:25:49

Test Laboratory: Neutron Engineering Inc.

nabi Tablet SNB02-NV7A 802.11A 5785MHz CH157 Test Position 1

DUT: nabi Table; Type: t SNB02-NV7A; Serial: NA

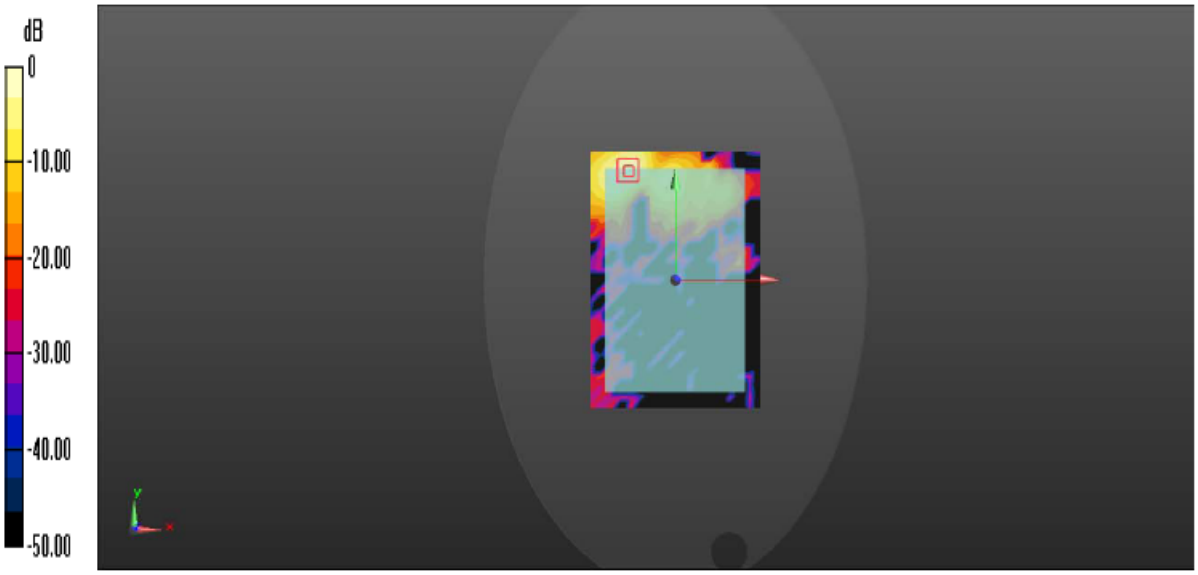
Communication System: UID 0, IEEE 802.11a WiFi 5G(OFDM, 6 Mbps,) (0); Frequency: 5785 MHz
Medium parameters used (interpolated): f = 5785 MHz; σ = 6.199 S/m; ε_r = 48.33; ρ = 996 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(4.19, 4.19, 4.19); Calibrated: 09/16/2013;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1390; Calibrated: 09/10/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1222
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Test Position 1/SNB02-NV7A CH157/Area Scan (18x25x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.549 W/kg

Test Position 1/SNB02-NV7A CH157/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.295 V/m; Power Drift = -4.05 dB
Peak SAR (extrapolated) = 0.595 W/kg
SAR(1 g) = 0.241 W/kg; SAR(10 g) = 0.088 W/kg
Maximum value of SAR (measured) = 0.566 W/kg



0 dB = 0.549 W/kg = -2.60 dBW/kg

Date/Time: 03/24/2014 09:46:25

Test Laboratory: Neutron Engineering Inc.

nabi Tablet SNB02-NV7A 802.11A 5785MHz CH157 Test Position 2

DUT: nabi Table; Type: t SNB02-NV7A; Serial: NA

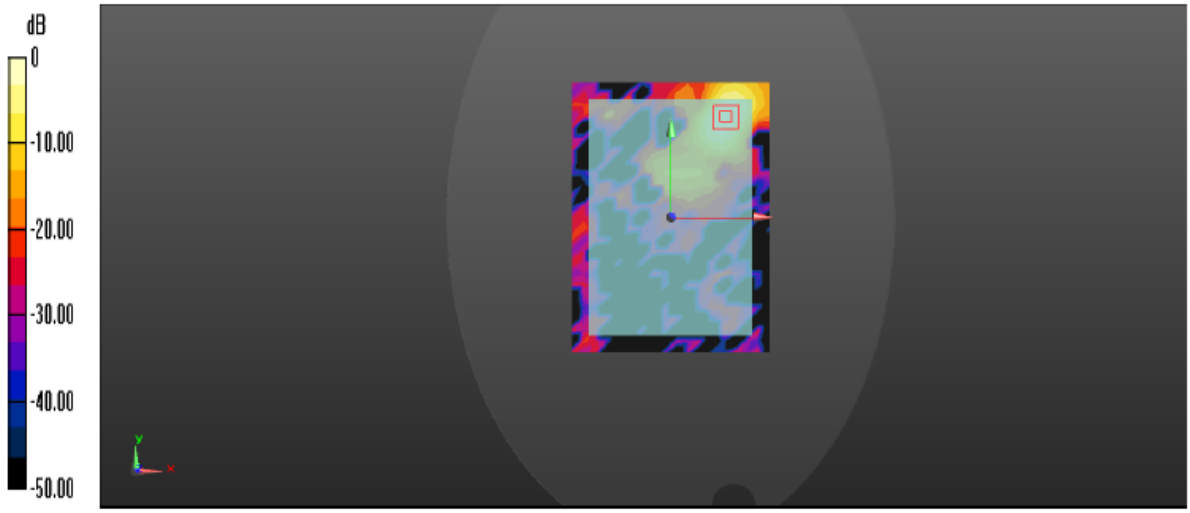
Communication System: UID 0, IEEE 802.11a WiFi 5G(OFDM, 6 Mbps,) (0); Frequency: 5785 MHz
Medium parameters used (interpolated): f = 5785 MHz; σ = 6.199 S/m; ε_r = 48.33; ρ = 996 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(4.19, 4.19, 4.19); Calibrated: 09/16/2013;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1390; Calibrated: 09/10/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1222
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Test Position 2/SNB02-NV7A CH157/Area Scan (18x25x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.865 W/kg

Test Position 2/SNB02-NV7A CH157/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.2374 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.26 W/kg
SAR(1 g) = 0.382 W/kg; SAR(10 g) = 0.138 W/kg
Maximum value of SAR (measured) = 0.894 W/kg



0 dB = 0.865 W/kg = -0.63 dBW/kg

Date/Time: 03/22/2014 15:29:30

Test Laboratory: Neutron Engineering Inc.

nabi Tablet SNB02-NV7A 802.11A 5785MHz CH157 Test Position 2(Remove rear cover)

DUT: nabi Table; Type: t SNB02-NV7A; Serial: NA

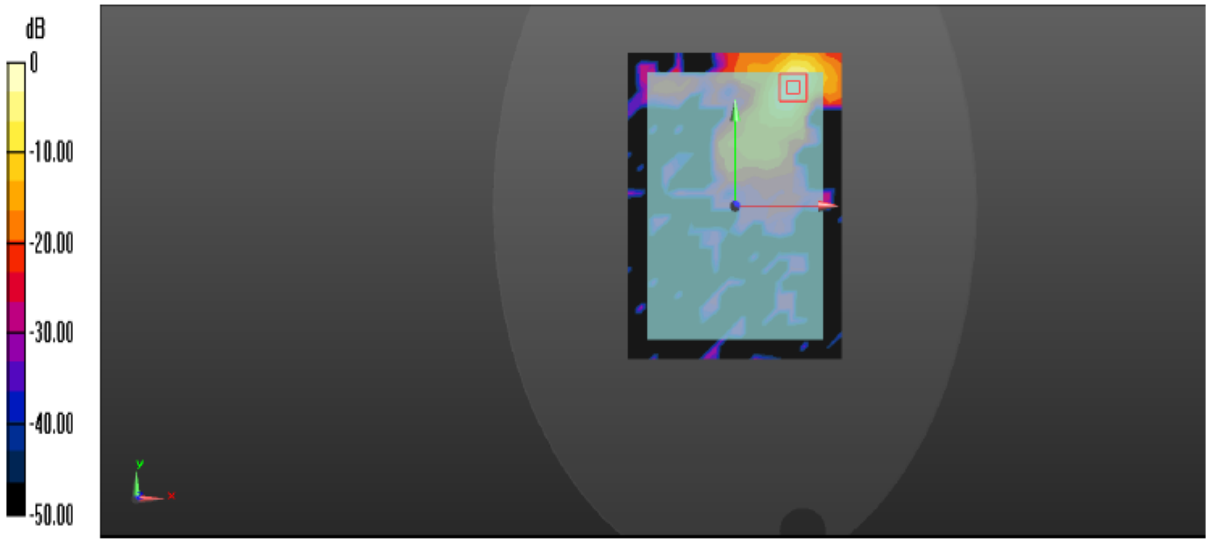
Communication System: UID 0, IEEE 802.11a WiFi 5G(OFDM, 6 Mbps,) (0); Frequency: 5785 MHz
Medium parameters used (interpolated): f = 5785 MHz; σ = 6.199 S/m; ε_r = 48.33; ρ = 996 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(4.19, 4.19, 4.19); Calibrated: 09/16/2013;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1390; Calibrated: 09/10/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1222
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Test Position 2/SNB02-NV7A CH157/Area Scan (18x25x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.49 W/kg

Test Position 2/SNB02-NV7A CH157/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.5617 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 2.82 W/kg
SAR(1 g) = 0.660 W/kg; SAR(10 g) = 0.205 W/kg
Maximum value of SAR (measured) = 1.70 W/kg



0 dB = 1.49 W/kg = 1.73 dBW/kg

Date/Time: 03/22/2014 16:44:12

Test Laboratory: Neutron Engineering Inc.

nabi Tablet SNB02-NV7A 802.11A 5745MHz CH149 Test Position 2(Remove rear cover)

DUT: nabi Table; Type: t SNB02-NV7A; Serial: NA

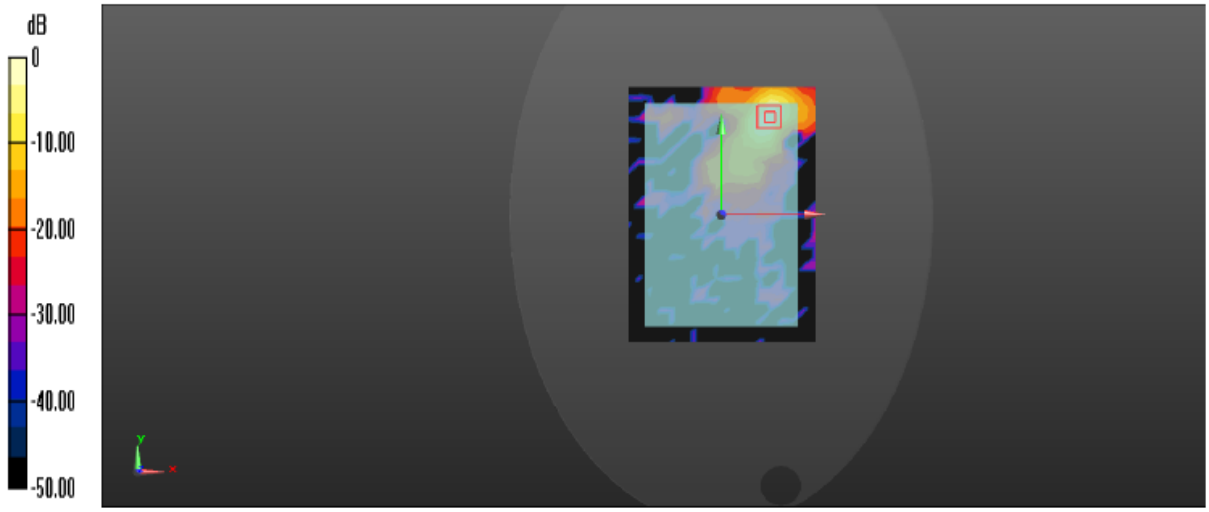
Communication System: UID 0, IEEE 802.11a WiFi 5G(OFDM, 6 Mbps,) (0); Frequency: 5745 MHz
Medium parameters used (interpolated): f = 5745 MHz; σ = 6.143 S/m; ε_r = 48.41; ρ = 996 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(4.19, 4.19, 4.19); Calibrated: 09/16/2013;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1390; Calibrated: 09/10/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1222
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Test Position 2/SNB02-NV7A CH149/Area Scan (18x25x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.53 W/kg

Test Position 2/SNB02-NV7A CH149/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.6706 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 2.69 W/kg
SAR(1 g) = 0.656 W/kg; SAR(10 g) = 0.203 W/kg
Maximum value of SAR (measured) = 1.64 W/kg



0 dB = 1.53 W/kg = 1.85 dBW/kg

Date/Time: 03/24/2014 11:03:08

Test Laboratory: Neutron Engineering Inc.

nabi Tablet SNB02-NV7A 802.11A 5825MHz CH165 Test Position 2(Remove Rear cover)

DUT: nabi Table; Type: t SNB02-NV7A; Serial: NA

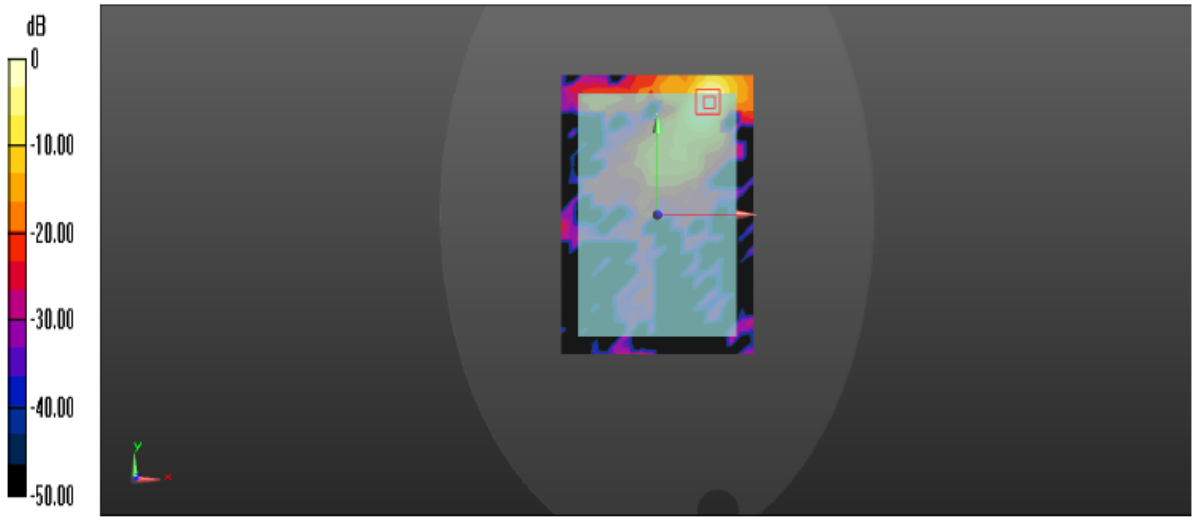
Communication System: UID 0, IEEE 802.11a WiFi 5G(OFDM, 6 Mbps,) (0); Frequency: 5825 MHz
Medium parameters used (interpolated): f = 5825 MHz; σ = 6.22 S/m; ε_r = 48.3; ρ = 996 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(4.19, 4.19, 4.19); Calibrated: 09/16/2013;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1390; Calibrated: 09/10/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1222
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Test Position 2/SNB02-NV7A CH165/Area Scan (18x25x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.34 W/kg

Test Position 2/SNB02-NV7A CH165/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.449 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 2.33 W/kg
SAR(1 g) = 0.573 W/kg; SAR(10 g) = 0.185 W/kg
Maximum value of SAR (measured) = 1.42 W/kg



0 dB = 1.34 W/kg = 1.27 dBW/kg

Date/Time: 03/22/2014 18:30:37

Test Laboratory: Neutron Engineering Inc.

nabi Tablet SNB02-NV7A 802.11A 5785MHz CH157 Test Position 3

DUT: nabi Table; Type: t SNB02-NV7A; Serial: NA

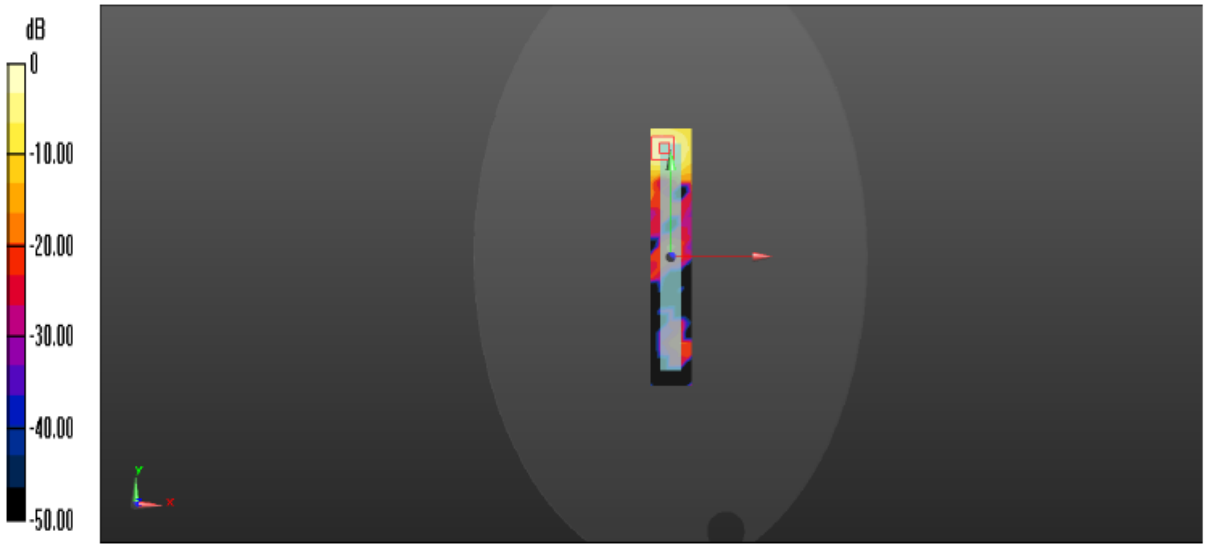
Communication System: UID 0, IEEE 802.11a WiFi 5G(OFDM, 6 Mbps,) (0); Frequency: 5785 MHz
Medium parameters used (interpolated): f = 5785 MHz; σ = 6.199 S/m; ε_r = 48.33; ρ = 996 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(4.19, 4.19, 4.19); Calibrated: 09/16/2013;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1390; Calibrated: 09/10/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1222
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Test Position 3/SNB02-NV7A CH157/Area Scan (5x25x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.547 W/kg

Test Position 3/SNB02-NV7A CH157/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.763 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.920 W/kg
SAR(1 g) = 0.250 W/kg; SAR(10 g) = 0.093 W/kg
Maximum value of SAR (measured) = 0.588 W/kg



0 dB = 0.547 W/kg = -2.62 dBW/kg

Date/Time: 03/24/2014 13:41:14

Test Laboratory: Neutron Engineering Inc.

nabi Tablet SNB02-NV7A 802.11A 5785MHz CH157 Test Position 4

DUT: nabi Table; Type: t SNB02-NV7A; Serial: NA

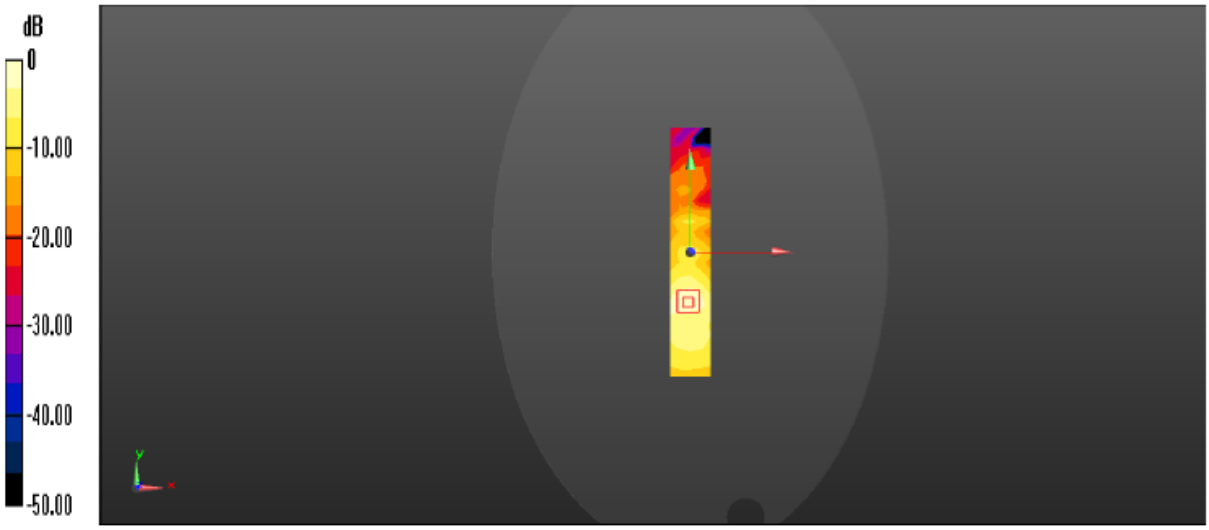
Communication System: UID 0, IEEE 802.11a WiFi 5G(OFDM, 6 Mbps,) (0); Frequency: 5785 MHz
Medium parameters used (interpolated): f = 5785 MHz; σ = 6.199 S/m; ε_r = 48.33; ρ = 996 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(4.19, 4.19, 4.19); Calibrated: 09/16/2013;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1390; Calibrated: 09/10/2013
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1222
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Test Position 4/SNB02-NV7A CH56/Area Scan (5x25x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.684 W/kg

Test Position 4/SNB02-NV7A CH56/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.849 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.06 W/kg
SAR(1 g) = 0.285 W/kg; SAR(10 g) = 0.105 W/kg
Maximum value of SAR (measured) = 0.685 W/kg



0 dB = 0.684 W/kg = -1.65 dBW/kg

4. Probe Calibration Certificate

EX3DV4

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 **Neutron Engineering (Auden)**

Certificate No: **EX3-3932_Sep13**

CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:3932**

Calibration procedure(s) **QA CAL-01.v9, QA CAL-14.v4, QA CAL-23.v5, QA CAL-25.v6**
Calibration procedure for dosimetric E-field probes

Calibration date: **September 16, 2013**

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
Power meter E4419B	GB41293874	04-Apr-13 (No. 217-01733)	Apr-14
Power sensor E4412A	MY41498087	04-Apr-13 (No. 217-01733)	Apr-14
Reference 3 dB Attenuator	SN: S5054 (3c)	04-Apr-13 (No. 217-01737)	Apr-14
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-13 (No. 217-01735)	Apr-14
Reference 30 dB Attenuator	SN: S5129 (30b)	04-Apr-13 (No. 217-01738)	Apr-14
Reference Probe ES3DV2	SN: 3013	28-Dec-12 (No. ES3-3013_Dec12)	Dec-13
DAE4	SN: 660	4-Sep-13 (No. DAE4-660_Sep13)	Apr-14
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Apr-13)	In house check: Apr-15
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-12)	In house check: Oct-13

	Name	Function	Signature
Calibrated by:	Leif Klysner	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: September 17, 2013

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:

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.e., ϑ = 0 is normal to probe axis

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
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 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization ϑ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect 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 with CW signal (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; Dx,y,z; VRx,y,z: A, B, C, D* 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 ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values 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 ± 50 MHz to ± 100 MHz.
- *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.

Probe EX3DV4

SN:3932

Manufactured: July 24, 2013
Calibrated: September 16, 2013

Calibrated for DASY/EASY Systems
(Note: non-compatible with DASY2 system!)