LG Electronics Inc.

DUT: LG-T310i; Type: Cellular/PCS GSM with Bluetooth&WLAN; Serial: #1

Communication System: GPRS 1900; Frequency: 1880 MHz;Duty Cycle: 1:2.77
Medium parameters used: f = 1880 MHz; σ = 1.48 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

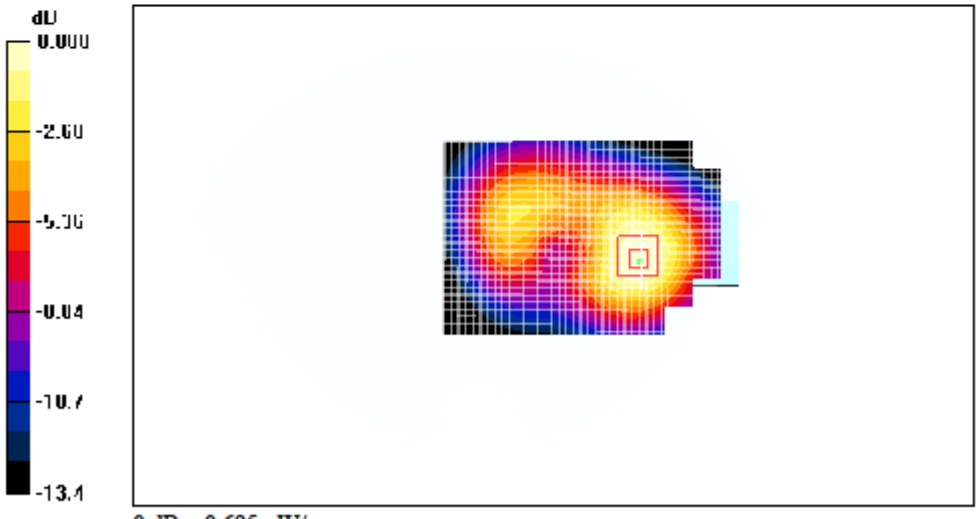
Test Date: 07/16/2010;Ambient Temp: 22.0°C;Tissue Temp: 21.8°C

Probe: ES3DV3 - SN3066; ConvF(4.2, 4.2, 4.2); Calibrated: 2010-02-24
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE3 Sn362; Calibrated: 2010-04-30
Phantom: SAM with CRP 1800MHz; Type: SAM; Serial: TP-1244
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Flat Touch ,CH661, Front, 3TX, Fixed Ant, Standard Battery

GPRS1900/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.695 mW/g

GPRS1900/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.1 V/m; Power Drift = -0.148 dB
Peak SAR (extrapolated) = 0.864 W/kg
SAR(1 g) = 0.600 mW/g; SAR(10 g) = 0.386 mW/g
Maximum value of SAR (measured) = 0.695 mW/g



0 dB = 0.695mW/g

LG Electronics Inc.

DUT: LG-T310i; Type: Cellular/PCS GSM with Bluetooth&WLAN; Serial: #1

Communication System: GPRS 1900; Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; σ = 1.48 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

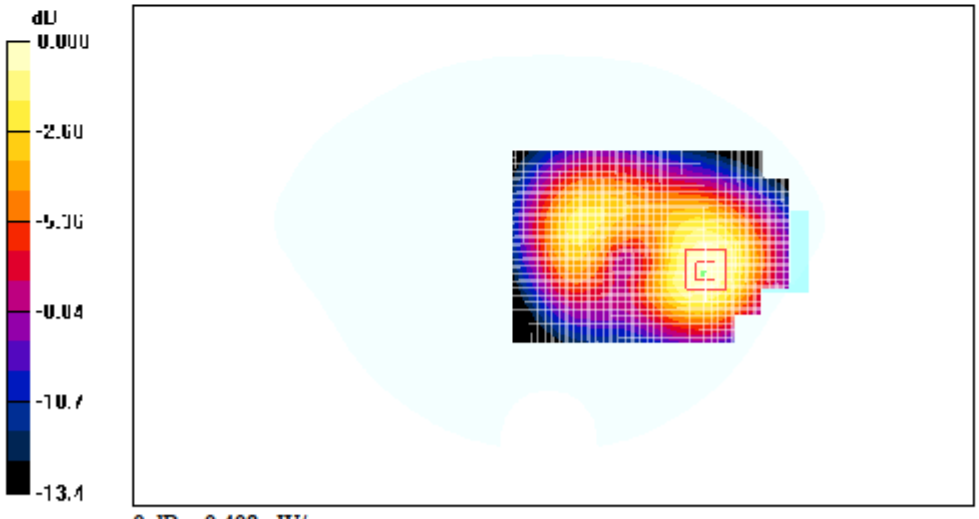
Test Date: 07/16/2010;Ambient Temp: 22.0°C;Tissue Temp: 21.8°C

Probe: ES3DV3 - SN3066; ConvF(4.2, 4.2, 4.2); Calibrated: 2010-02-24
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE3 Sn362; Calibrated: 2010-04-30
Phantom: SAM with CRP 1800MHz; Type: SAM; Serial: TP-1244
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Flat Touch ,CH661, Front, 2TX, Fixed Ant, Standard Battery

GPRS1900/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.410 mW/g

GPRS1900/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.65 V/m; Power Drift = 0.096 dB
Peak SAR (extrapolated) = 0.506 W/kg
SAR(1 g) = 0.350 mW/g; SAR(10 g) = 0.226 mW/g
Maximum value of SAR (measured) = 0.408 mW/g



0 dB = 0.408mW/g

LG Electronics Inc.

DUT: LG-T310i; Type: Cellular/PCS GSM with Bluetooth&WLAN; Serial: #1

Communication System: GPRS 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.48 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

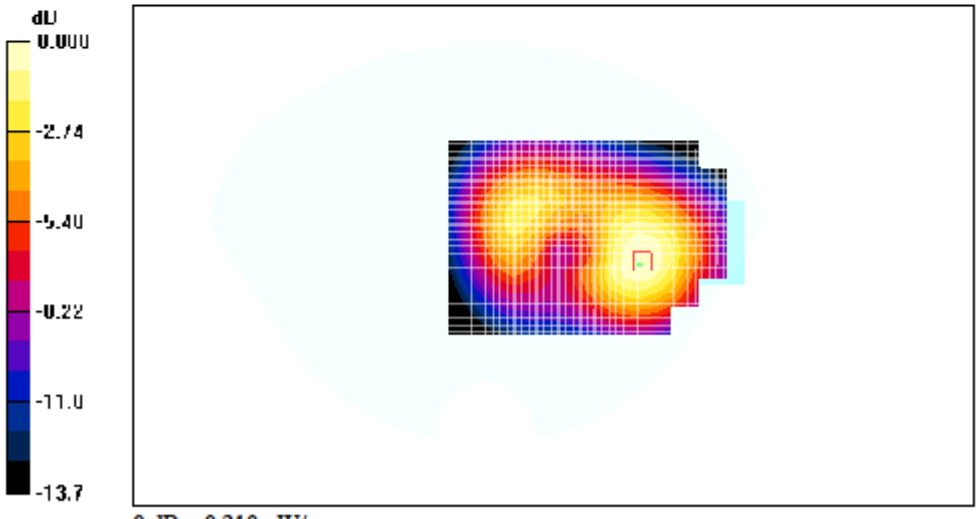
Test Date: 07/16/2010;Ambient Temp: 22.0°C;Tissue Temp: 21.8°C

Probe: ES3DV3 - SN3066; ConvF(4.2, 4.2, 4.2); Calibrated: 2010-02-24
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE3 Sn362; Calibrated: 2010-04-30
Phantom: SAM with CRP 1800MHz; Type: SAM; Serial: TP-1244
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Flat Touch ,CH661, Front, 1TX, Fixed Ant, Standard Battery

GPRS1900/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.207 mW/g

GPRS1900/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.87 V/m; Power Drift = 0.057 dB
Peak SAR (extrapolated) = 0.262 W/kg
SAR(1 g) = 0.178 mW/g; SAR(10 g) = 0.114 mW/g
Maximum value of SAR (measured) = 0.210 mW/g



0 dB = 0.210mW/g

LG Electronics Inc.

DUT: LG-T310i; Type: Cellular/PCS GSM with Bluetooth&WLAN; Serial: #1

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.99 mho/m; ε_r = 51.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: 07/17/2010;Ambient Temp: 22.0°C;Tissue Temp: 21.8°C

Probe: ES3DV3 - SN3066; ConvF(3.9, 3.9, 3.9); Calibrated: 2010-02-24
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE3 Sn362; Calibrated: 2010-04-30
Phantom: SAM with CRP 1800MHz; Type: SAM; Serial: TP-1244
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

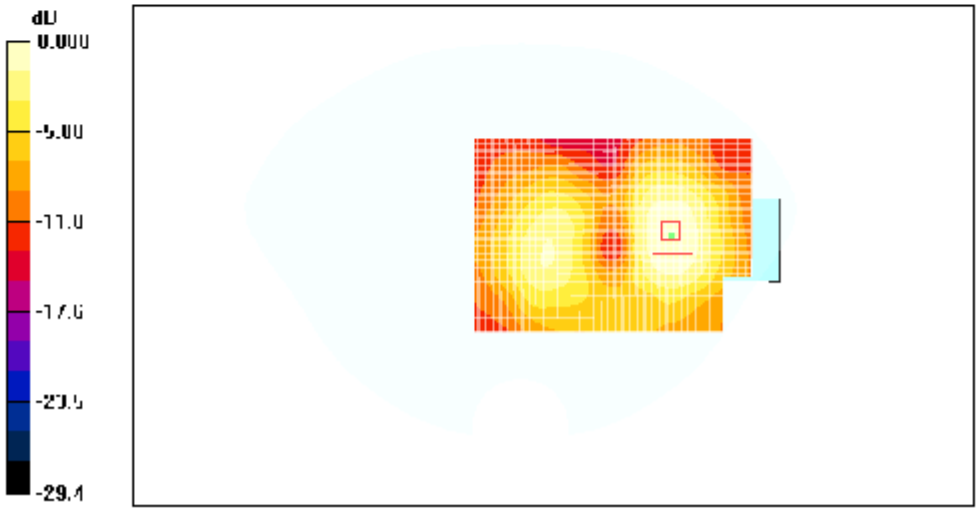
Flat Touch, Ch6, Front, Fixed Ant, Standard Battery

WLAN/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.035 mW/g

WLAN/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.57 V/m; Power Drift = 0.252 dB
Peak SAR (extrapolated) = 0.049 W/kg
SAR(1 g) = 0.028 mW/g; SAR(10 g) = 0.016 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.034 mW/g



0 dB = 0.034mW/g

LG Electronics Inc.

DUT: LG-T310i; Type: Cellular/PCS GSM with Bluetooth&WLAN; Serial: #1

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.99 mho/m; ε_r = 51.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: 07/17/2010;Ambient Temp: 22.0°C;Tissue Temp: 21.8°C

Probe: ES3DV3 - SN3066; ConvF(3.9, 3.9, 3.9); Calibrated: 2010-02-24
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE3 Sn362; Calibrated: 2010-04-30
Phantom: SAM with CRP 1800MHz; Type: SAM; Serial: TP-1244
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

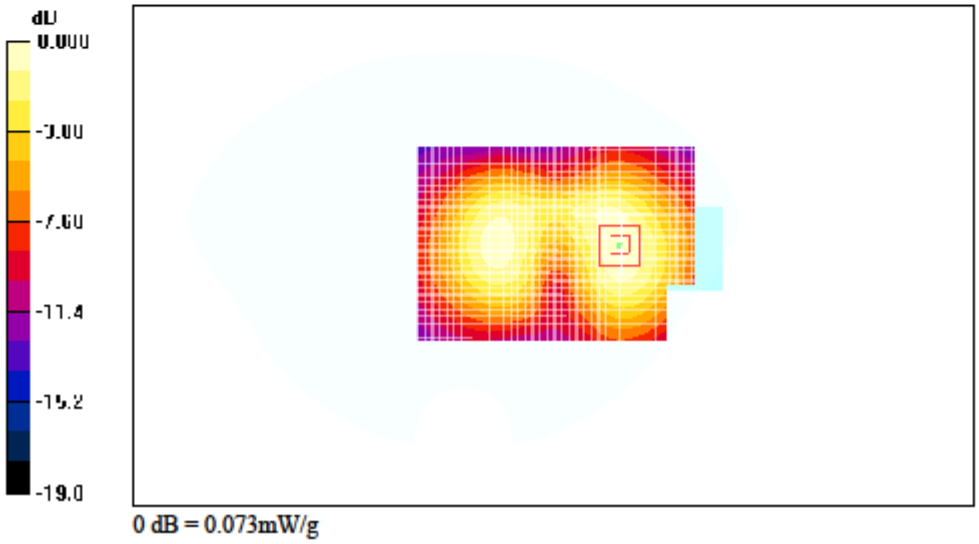
Flat Touch, Ch6, Rear, Fixed Ant, Standard Battery

WLAN/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.072 mW/g

WLAN/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.40 V/m; Power Drift = 0.215 dB
Peak SAR (extrapolated) = 0.107 W/kg
SAR(1 g) = 0.060 mW/g; SAR(10 g) = 0.035 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.073 mW/g



0 dB = 0.073mW/g

LG Electronics Inc.

DUT: LG-T310i; Type: Cellular/PCS GSM with Bluetooth&WLAN; Serial: #1

Communication System: WLAN; Frequency: 2412 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.95 mho/m; ε_r = 51.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: 07/17/2010;Ambient Temp: 22.0°C;Tissue Temp: 21.8°C

Probe: ES3DV3 - SN3066; ConvF(3.9, 3.9, 3.9); Calibrated: 2010-02-24
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE3 Sn362; Calibrated: 2010-04-30
Phantom: SAM with CRP 1800MHz; Type: SAM; Serial: TP-1244
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

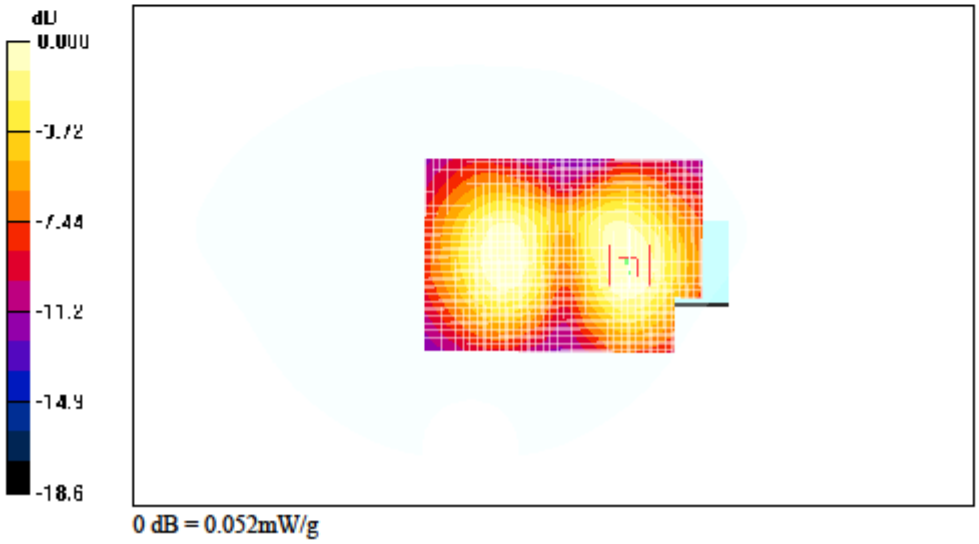
Flat Touch, Ch1, Rear, Fixed Ant, Standard Battery

WLAN/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.055 mW/g

WLAN/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.06 V/m; Power Drift = 0.047 dB
Peak SAR (extrapolated) = 0.078 W/kg
SAR(1 g) = 0.043 mW/g; SAR(10 g) = 0.025 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.052 mW/g



0 dB = 0.052mW/g

LG Electronics Inc.

DUT: LG-T310i; Type: Cellular/PCS GSM with Bluetooth&WLAN; Serial: #1

Communication System: WLAN; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2462 MHz; σ = 2.03 mho/m; ε_r = 51; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: 07/17/2010;Ambient Temp: 22.0°C;Tissue Temp: 21.8°C

Probe: ES3DV3 - SN3066; ConvF(3.9, 3.9, 3.9); Calibrated: 2010-02-24
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE3 Sn362; Calibrated: 2010-04-30
Phantom: SAM with CRP 1800MHz; Type: SAM; Serial: TP-1244
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

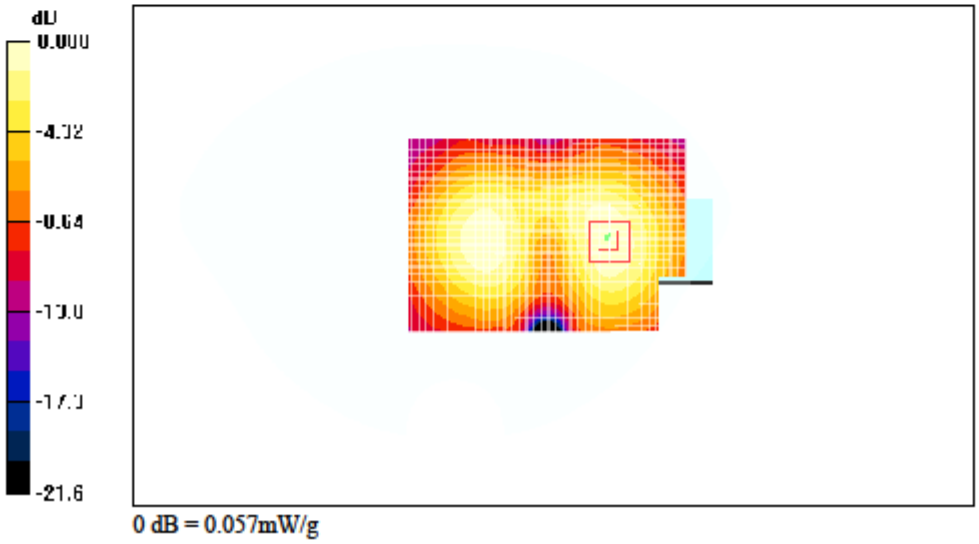
Flat Touch, Ch11, Rear, Fixed Ant, Standard Battery

WLAN/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.055 mW/g

WLAN/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.28 V/m; Power Drift = 0.303 dB
Peak SAR (extrapolated) = 0.085 W/kg
SAR(1 g) = 0.047 mW/g; SAR(10 g) = 0.027 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.057 mW/g



0 dB = 0.057mW/g

LG Electronics Inc.

DUT: LG-T310i; Type: Cellular/PCS GSM with Bluetooth&WLAN; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 837 MHz; σ = 0.902 mho/m; ε_r = 42.7; ρ = 1000 kg/m^3
Phantom section: Right Section

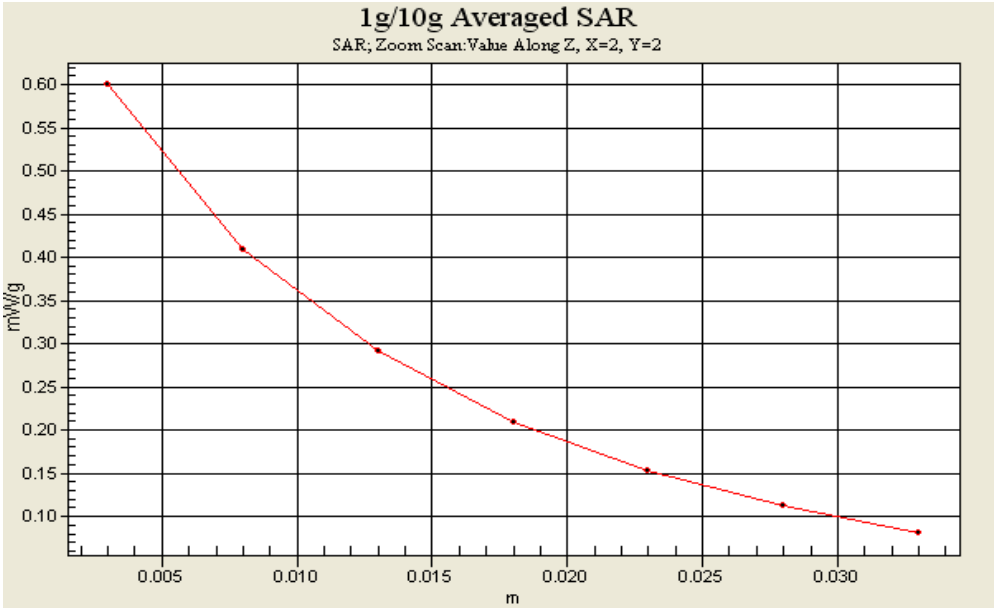
Test Date: 07/19/2010;Ambient Temp: 22.0°C;Tissue Temp: 21.8°C

Probe: ES3DV3 - SN3066; ConvF(5.68, 5.68, 5.68); Calibrated: 2010-02-24
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE3 Sn362; Calibrated: 2010-04-30
Phantom: SAM with CRP 835MHz; Type: SAM; Serial: TP-1066
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Right Head Touch,CH190, Fixed Ant, Standard Battery

GSM850/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.624 mW/g

GSM850/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.79 V/m; Power Drift = 0.072 dB
Peak SAR (extrapolated) = 0.780 W/kg
SAR(1 g) = 0.520 mW/g; SAR(10 g) = 0.356 mW/g
Maximum value of SAR (measured) = 0.600 mW/g



LG Electronics Inc.

DUT: LG-T310i; Type: Cellular/PCS GSM with Bluetooth&WLAN; Serial: #1

Communication System: PCS 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.37 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3
Phantom section: Left Section

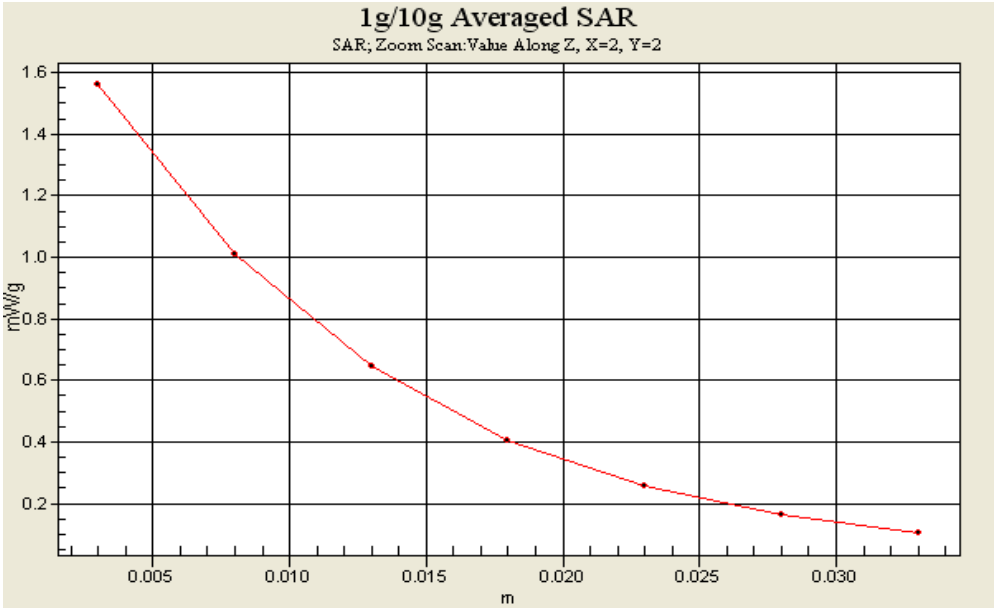
Test Date: 07/16/2010;Ambient Temp: 22.0°C;Tissue Temp: 21.8°C

Probe: ES3DV3 - SN3066; ConvF(4.66, 4.66, 4.66); Calibrated: 2010-02-24
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE3 Sn362; Calibrated: 2010-04-30
Phantom: SAM with CRP 835MHz; Type: SAM; Serial: TP-1066
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Touch,CH661, Fixed Ant, Standard Battery

PCS1900/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.68 mW/g

PCS1900/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.35 V/m; Power Drift = -0.013 dB
Peak SAR (extrapolated) = 2.05 W/kg
SAR(1 g) = 1.28 mW/g; SAR(10 g) = 0.732 mW/g
Maximum value of SAR (measured) = 1.56 mW/g



LG Electronics Inc.

DUT: LG-T310i; Type: Cellular/PCS GSM with Bluetooth&WLAN; Serial: #1

Communication System: GPRS 850; Frequency: 836.6 MHz;Duty Cycle: 1:2.075
Medium parameters used: f = 837 MHz; σ = 0.937 mho/m; ε_r = 54.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

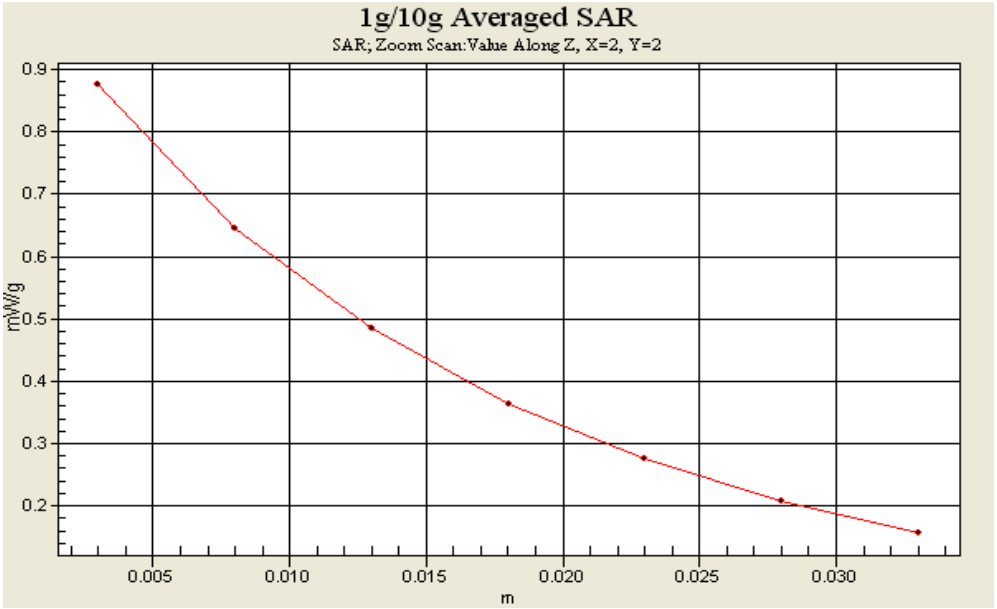
Test Date: 07/19/2010;Ambient Temp: 22.0°C;Tissue Temp: 21.8°C

Probe: ES3DV3 - SN3066; ConvF(5.55, 5.55, 5.55); Calibrated: 2010-02-24
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE3 Sn362; Calibrated: 2010-04-30
Phantom: SAM with CRP 1800MHz; Type: SAM; Serial: TP-1244
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Flat Touch ,CH190, Rear, 4TX, Fixed Ant, Standard Battery

GPRS850/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.890 mW/g

GPRS850/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.5 V/m; Power Drift = -0.005 dB
Peak SAR (extrapolated) = 1.05 W/kg
SAR(1 g) = 0.780 mW/g; SAR(10 g) = 0.563 mW/g
Maximum value of SAR (measured) = 0.876 mW/g



LG Electronics Inc.

DUT: LG-T310i; Type: Cellular/PCS GSM with Bluetooth&WLAN; Serial: #1

Communication System: GPRS 1900; Frequency: 1880 MHz;Duty Cycle: 1:2.77
Medium parameters used: f = 1880 MHz; σ = 1.48 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

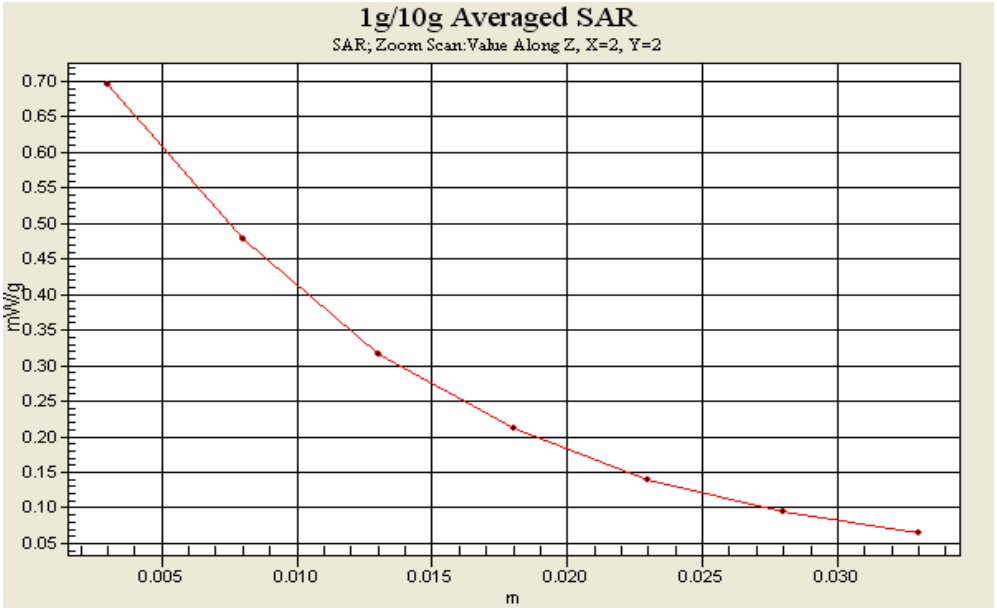
Test Date: 07/16/2010;Ambient Temp: 22.0°C;Tissue Temp: 21.8°C

Probe: ES3DV3 - SN3066; ConvF(4.2, 4.2, 4.2); Calibrated: 2010-02-24
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE3 Sn362; Calibrated: 2010-04-30
Phantom: SAM with CRP 1800MHz; Type: SAM; Serial: TP-1244
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Flat Touch ,CH661, Front, 3TX, Fixed Ant, Standard Battery

GPRS1900/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.695 mW/g

GPRS1900/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.1 V/m; Power Drift = -0.148 dB
Peak SAR (extrapolated) = 0.864 W/kg
SAR(1 g) = 0.600 mW/g; SAR(10 g) = 0.386 mW/g
Maximum value of SAR (measured) = 0.695 mW/g



LG Electronics Inc.

DUT: LG-T310i; Type: Cellular/PCS GSM with Bluetooth&WLAN; Serial: #1

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.99 mho/m; ε_r = 51.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: 07/17/2010;Ambient Temp: 22.0°C;Tissue Temp: 21.8°C

Probe: ES3DV3 - SN3066; ConvF(3.9, 3.9, 3.9); Calibrated: 2010-02-24
Sensor-Surface: 3mm (Mechanical Surface Detection)
Electronics: DAE3 Sn362; Calibrated: 2010-04-30
Phantom: SAM with CRP 1800MHz; Type: SAM; Serial: TP-1244
Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

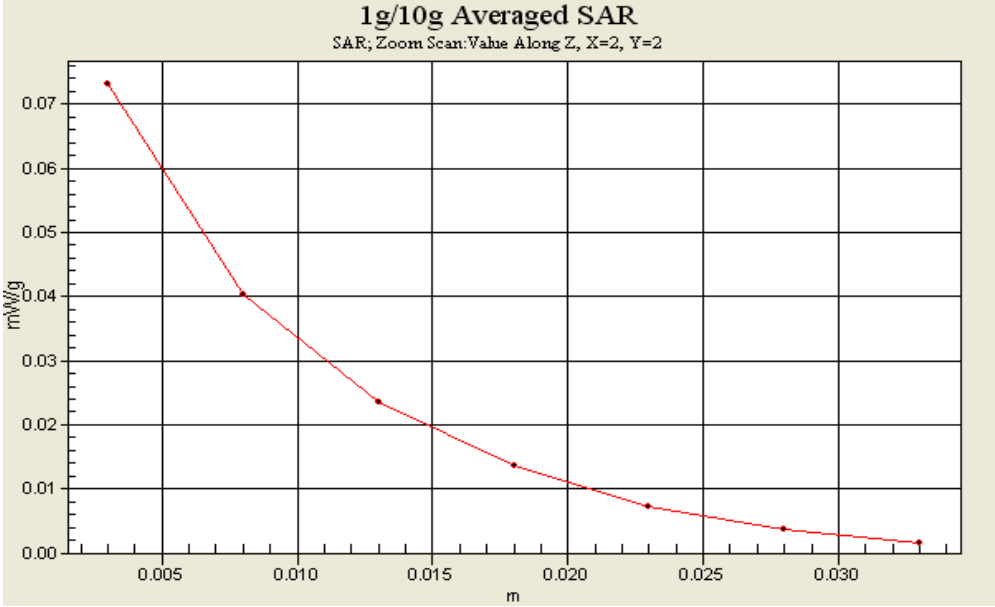
Flat Touch, Ch6, Rear, Fixed Ant, Standard Battery

WLAN/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.072 mW/g

WLAN/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.40 V/m; Power Drift = 0.215 dB
Peak SAR (extrapolated) = 0.107 W/kg
SAR(1 g) = 0.060 mW/g; SAR(10 g) = 0.035 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.073 mW/g



APPENDIX C: Calibration Certificates

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 LG (Dymstec)

Certificate No: ES3-3066_Feb10

CALIBRATION CERTIFICATE

Object	ES3DV3 - SN:3066
Calibration procedure(s)	QA CAL-01.v6, QA CAL-23.v3 and QA CAL-25.v2 Calibration procedure for dosimetric E-field probes
Calibration date:	February 24, 2010

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	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41495277	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41498087	1-Apr-09 (No. 217-01030)	Apr-10
Reference 3 dB Attenuator	SN: S5054 (3c)	31-Mar-09 (No. 217-01026)	Mar-10
Reference 20 dB Attenuator	SN: S5086 (20b)	31-Mar-09 (No. 217-01028)	Mar-10
Reference 30 dB Attenuator	SN: S5129 (30b)	31-Mar-09 (No. 217-01027)	Mar-10
Reference Probe ES3DV2	SN: 3013	30-Dec-09 (No. ES3-3013_Dec09)	Dec-10
DAE4	SN: 660	29-Sep-09 (No. DAE4-660_Sep09)	Sep-10

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-09)	In house check: Oct10

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: February 24, 2010

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	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 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 with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- *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 ≤ 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 ES3DV3

SN:3066

Manufactured:	December 14, 2004
Last calibrated:	February 16, 2009
Recalibrated:	February 24, 2010

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

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DASY - Parameters of Probe: ES3DV3 SN:3066

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	1.22	1.36	1.22	± 10.1%
DCP (mV)[B]	90.7	93.1	91.5	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dBuV	C	VR mV	Unc[E] (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	300.0	± 1.5%
			Y	0.00	0.00	1.00	300.0	
			Z	0.00	0.00	1.00	300.0	

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 NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Pages 5 and 6).

[B] Numerical linearization parameter: uncertainty not required.

[E] Uncertainty is determined using the maximum deviation from linear response applying recatangular distribution and is expressed for the square of the field value.

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DASY - Parameters of Probe: ES3DV3 SN:3066

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz]	Validity [MHz][C]	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth	Unc (k=2)
835	± 50 / ± 100	41.5 ± 5%	0.90 ± 5%	5.68	5.68	5.68	0.96	1.04	± 11.0%
1750	± 50 / ± 100	40.1 ± 5%	1.37 ± 5%	4.80	4.80	4.80	0.51	1.45	± 11.0%
1900	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	4.66	4.66	4.66	0.44	1.54	± 11.0%

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

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DASY - Parameters of Probe: ES3DV3 SN:3066

Calibration Parameter Determined in Body Tissue Simulating Media

f [MHz]	Validity [MHz][C]	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	55.2 ± 5%	0.97 ± 5%	5.55	5.55	5.55	0.72	1.20 ± 11.0%
1750	± 50 / ± 100	53.4 ± 5%	1.49 ± 5%	4.48	4.48	4.48	0.36	2.07 ± 11.0%
1900	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	4.20	4.20	4.20	0.33	2.39 ± 11.0%
2450	± 50 / ± 100	52.7 ± 5%	1.95 ± 5%	3.90	3.90	3.90	0.66	1.27 ± 11.0%

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

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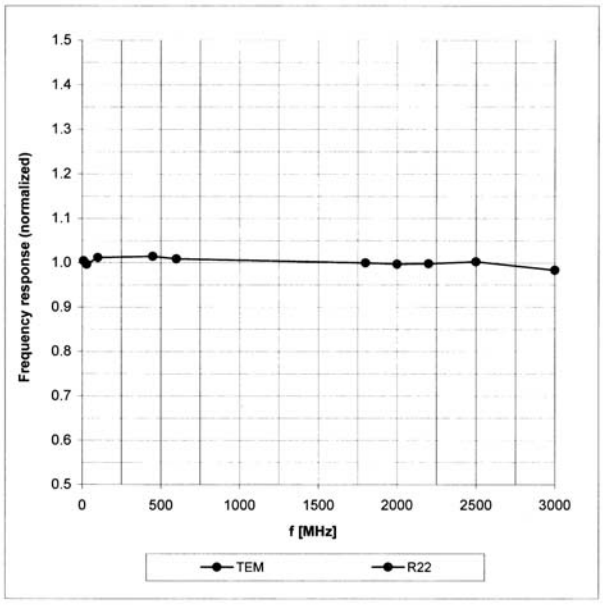
Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

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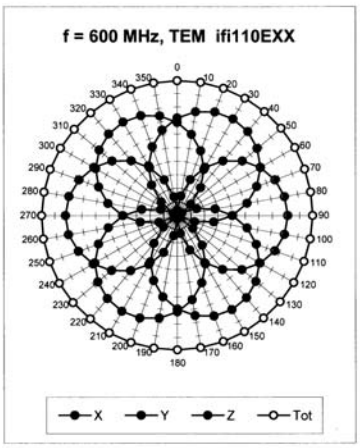
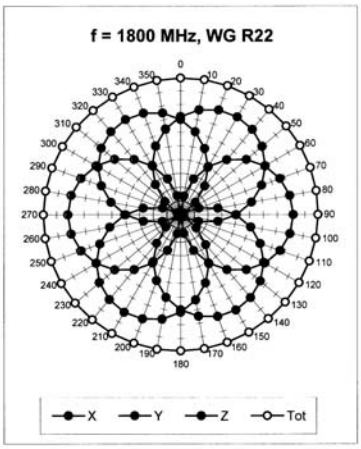
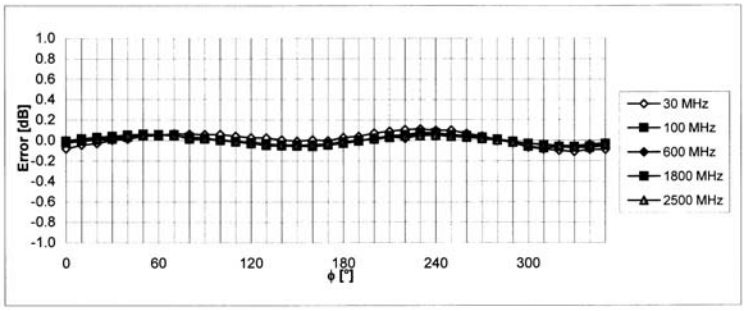
Receiving Pattern (ϕ), ϑ = 0°







Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)