Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 848.31 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 848.31 MHz; σ = 1.03 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

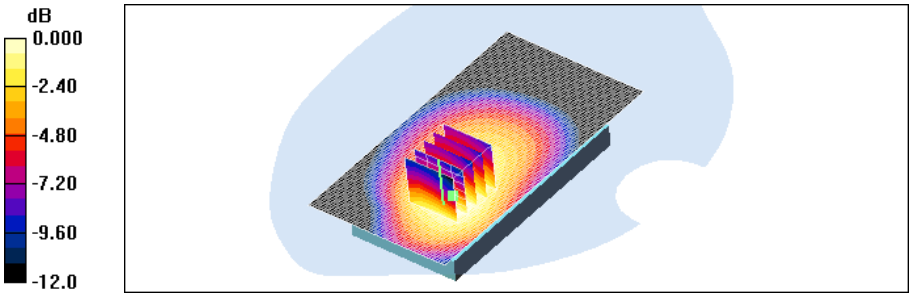
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Rear 777 EVDO/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.13 mW/g

Body Rear 777 EVDO/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.8 V/m; Power Drift = -0.178 dB
Peak SAR (extrapolated) = 1.49 W/kg
SAR(1 g) = 1.08 mW/g; SAR(10 g) = 0.751 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.14 mW/g



0 dB = 1.14mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm

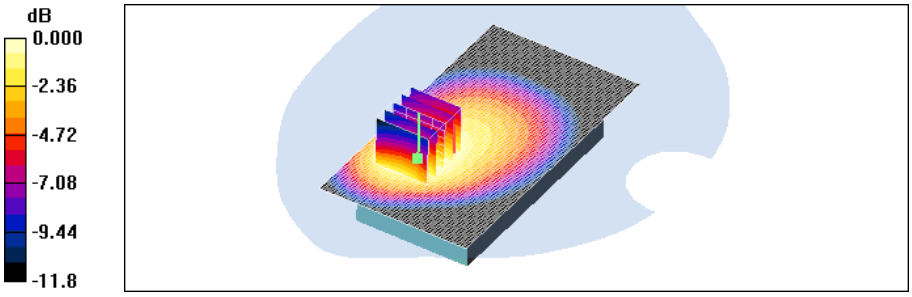
DUT: C811; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 824.7 MHz;Duty Cycle: 1:1
Medium parameters used: f = 825 MHz; σ = 0.996 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front 1013 EVDO/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.981 mW/g

Body Front 1013 EVDO/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.2 V/m; Power Drift = -0.007 dB
Peak SAR (extrapolated) = 1.22 W/kg
SAR(1 g) = 0.927 mW/g; SAR(10 g) = 0.659 mW/g
Maximum value of SAR (measured) = 0.992 mW/g



0 dB = 0.992mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

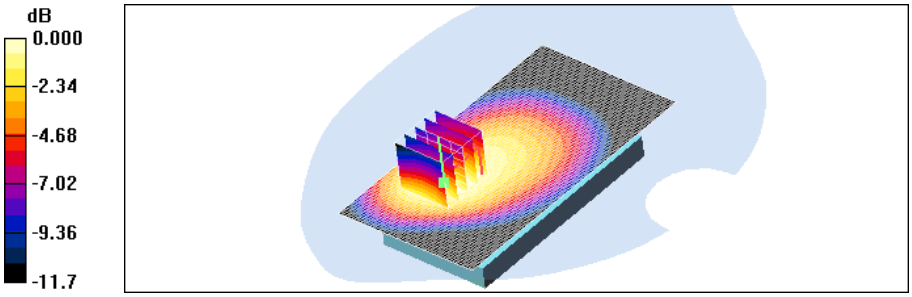
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front 384 EVDO/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.13 mW/g

Body Front 384 EVDO/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.2 V/m; Power Drift = -0.076 dB
Peak SAR (extrapolated) = 1.37 W/kg
SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.737 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.09 mW/g



0 dB = 1.09mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 848.31 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 848.31 MHz; σ = 1.03 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

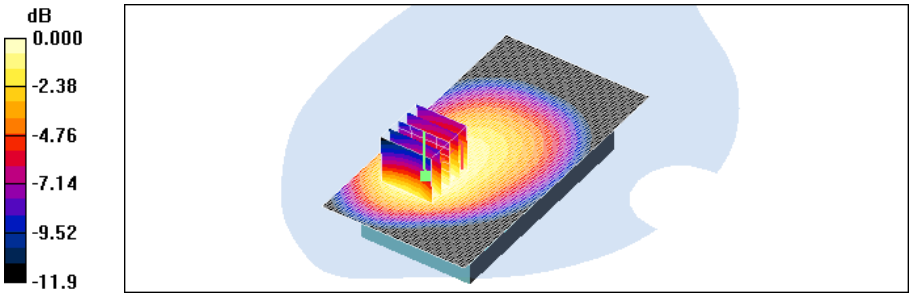
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front 777 EVDO/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.08 mW/g

Body Front 777 EVDO/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.0 V/m; Power Drift = -0.041 dB
Peak SAR (extrapolated) = 1.34 W/kg
SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.721 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.06 mW/g



0 dB = 1.06mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm

DUT: C811 (Side); Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

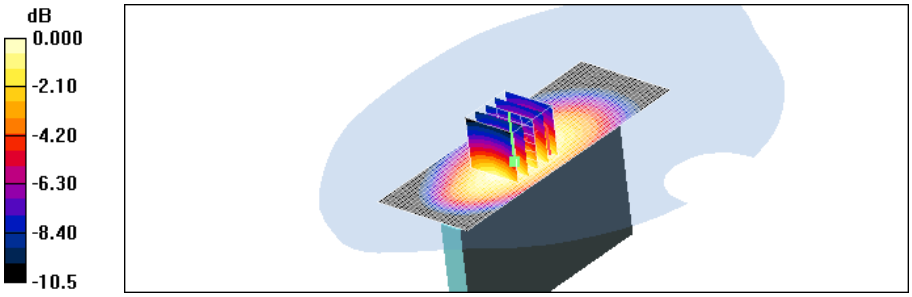
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Left 384 EVDO/Area Scan (41x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.746 mW/g

Body Left 384 EVDO/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.1 V/m; Power Drift = 0.011 dB
Peak SAR (extrapolated) = 0.933 W/kg
SAR(1 g) = 0.694 mW/g; SAR(10 g) = 0.482 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.744 mW/g



0 dB = 0.744mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

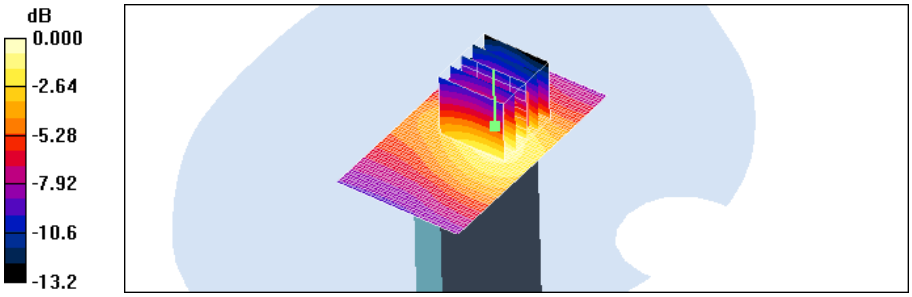
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body bottom 384 EVDO/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.133 mW/g

Body bottom 384 EVDO/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.9 V/m; Power Drift = -0.165 dB
Peak SAR (extrapolated) = 0.230 W/kg
SAR(1 g) = 0.124 mW/g; SAR(10 g) = 0.075 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.135 mW/g



0 dB = 0.135mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm
Option	Wireless Charging cover

DUT: C811; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 848.31 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 848.31 MHz; σ = 1.03 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

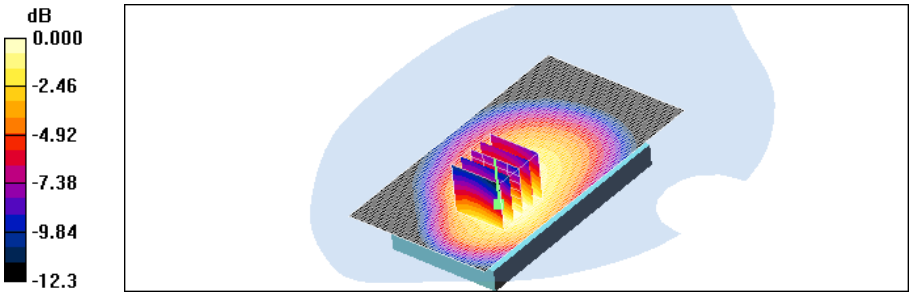
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Rear 777 EVDO Wireless cover/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.875 mW/g

Body Rear 777 EVDO Wireless cover/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.0 V/m; Power Drift = 0.074 dB
Peak SAR (extrapolated) = 1.08 W/kg
SAR(1 g) = 0.813 mW/g; SAR(10 g) = 0.583 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
aximum value of SAR (measured) = 0.868 mW/g



0 dB = 0.868mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm
Option	Extended Battery

DUT: C811; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 848.31 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 848.31 MHz; σ = 1.03 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

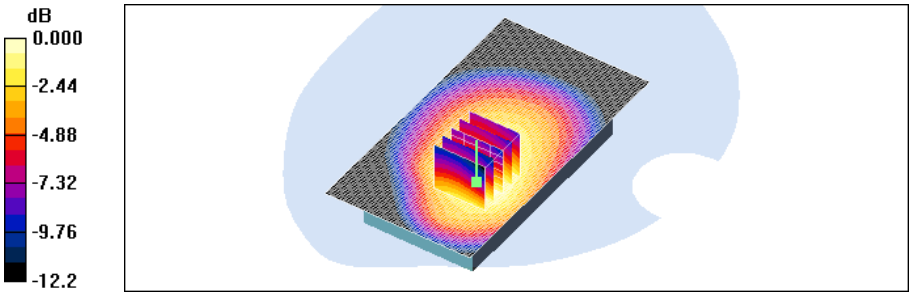
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Rear 777 EVDO Extended battery/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.872 mW/g

Body Rear 777 EVDO Extended battery/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.1 V/m; Power Drift = -0.058 dB
Peak SAR (extrapolated) = 1.10 W/kg
SAR(1 g) = 0.816 mW/g; SAR(10 g) = 0.580 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.874 mW/g



0 dB = 0.874mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm

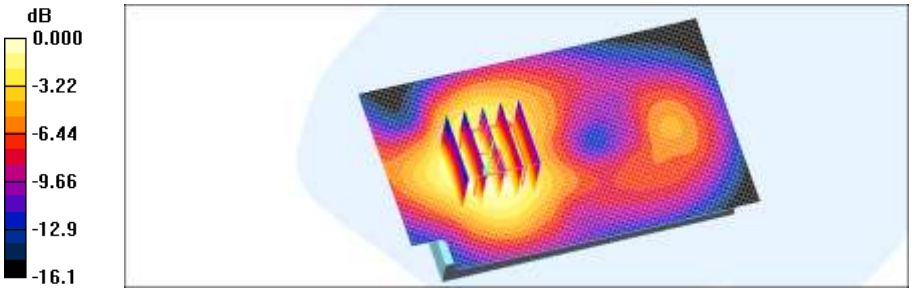
DUT: C811; Type: Bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ε_r = 54.3; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 1800/1900 MHz; Type: SAM

PCS1900 Body Rear 1xRTT 600/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.755 mW/g

PCS1900 Body Rear 1xRTT 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.1 V/m; Power Drift = -0.058 dB
Peak SAR (extrapolated) = 0.981 W/kg
SAR(1 g) = 0.705 mW/g; SAR(10 g) = 0.457 mW/g
Maximum value of SAR (measured) = 0.764 mW/g



0 dB = 0.764mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm

DUT: C811; Type: Bar; Serial: #1

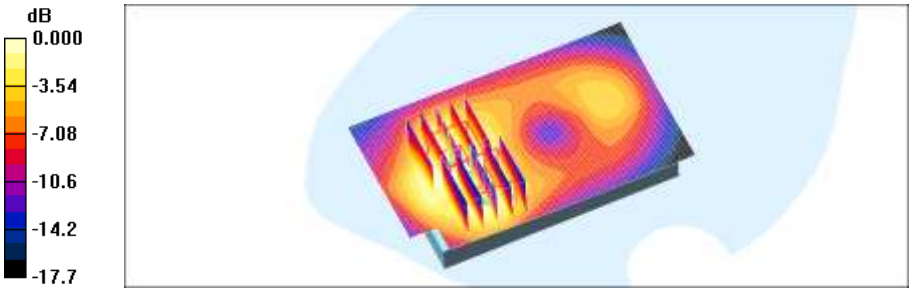
Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ε_r = 54.3; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 1800/1900 MHz; Type: SAM

PCS1900 Body Front 1xRTT 600/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.763 mW/g

PCS1900 Body Front 1xRTT 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.1 V/m; Power Drift = 0.004 dB
Peak SAR (extrapolated) = 1.02 W/kg
SAR(1 g) = 0.675 mW/g; SAR(10 g) = 0.429 mW/g
Maximum value of SAR (measured) = 0.720 mW/g

PCS1900 Body Front 1xRTT 600/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.1 V/m; Power Drift = 0.004 dB
Peak SAR (extrapolated) = 0.941 W/kg
SAR(1 g) = 0.562 mW/g; SAR(10 g) = 0.324 mW/g
Maximum value of SAR (measured) = 0.641 mW/g



0 dB = 0.641mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm
Option	Wireless Charging cover

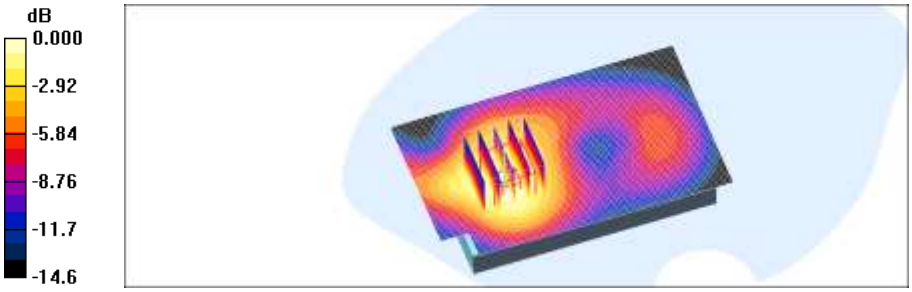
DUT: C811; Type: Bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ε_r = 54.3; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

PCS1900 Body Rear 1xRTT 600 Wireless cover/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.727 mW/g

PCS1900 Body Rear 1xRTT 600 Wireless cover/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.7 V/m; Power Drift = -0.003 dB
Peak SAR (extrapolated) = 0.963 W/kg
SAR(1 g) = 0.694 mW/g; SAR(10 g) = 0.452 mW/g
Maximum value of SAR (measured) = 0.746 mW/g



0 dB = 0.746mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm
Option	Extended Battery

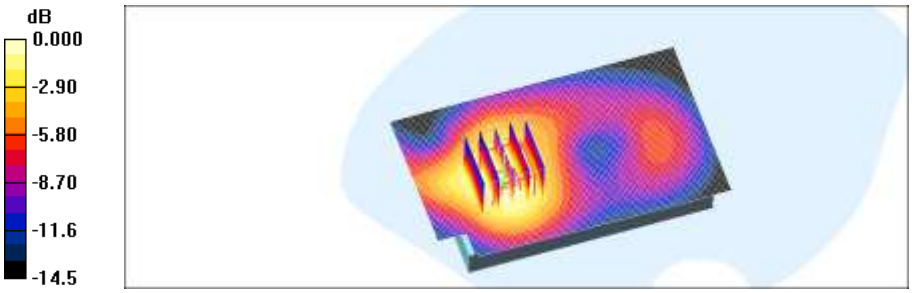
DUT: C811; Type: Bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ε_r = 54.3; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

PCS1900 Body Rear 1xRTT 600 Extended battery/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.718 mW/g

PCS1900 Body Rear 1xRTT 600 Extended battery/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.7 V/m; Power Drift = -0.014 dB
Peak SAR (extrapolated) = 0.949 W/kg
SAR(1 g) = 0.690 mW/g; SAR(10 g) = 0.450 mW/g
Maximum value of SAR (measured) = 0.743 mW/g



0 dB = 0.743mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm

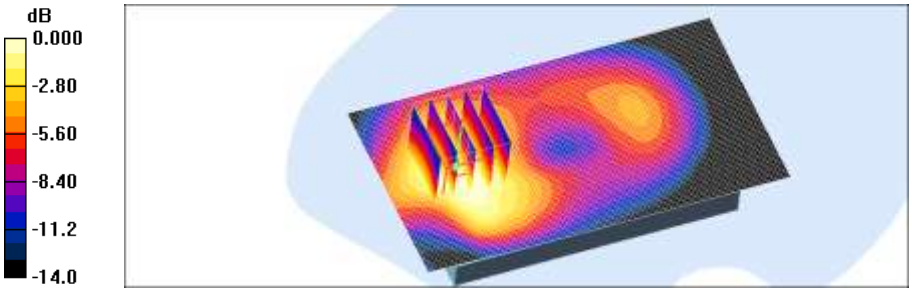
DUT: C811; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 835/900 Phamtom ; Type: SAM

Body Rear 600 EVDO/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.688 mW/g

Body Rear 600 EVDO/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.1 V/m; Power Drift = -0.074 dB
Peak SAR (extrapolated) = 0.876 W/kg
SAR(1 g) = 0.610 mW/g; SAR(10 g) = 0.402 mW/g
Maximum value of SAR (measured) = 0.647 mW/g



0 dB = 0.647mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm

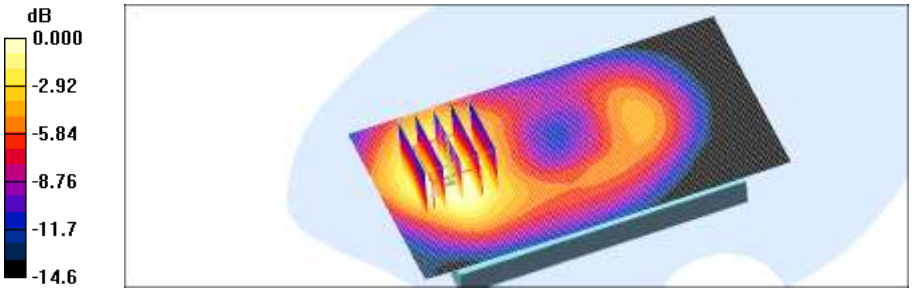
DUT: C811; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 835/900 Phamtom ; Type: SAM

Body Front 600 EVDO/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.823 mW/g

Body Front 600 EVDO/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.8 V/m; Power Drift = 0.004 dB
Peak SAR (extrapolated) = 1.07 W/kg
SAR(1 g) = 0.757 mW/g; SAR(10 g) = 0.483 mW/g
Maximum value of SAR (measured) = 0.809 mW/g



0 dB = 0.809mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm

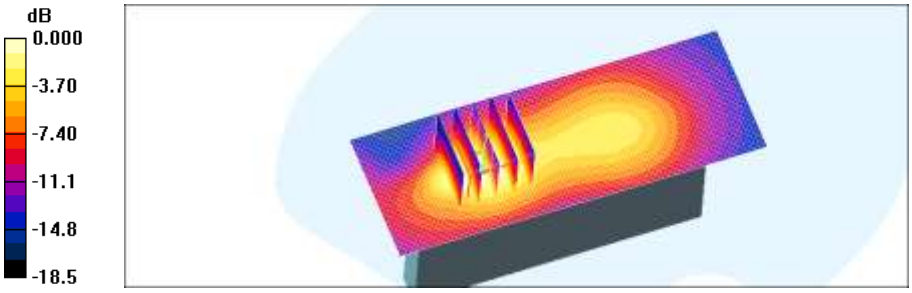
DUT: C811 (Side); Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Body Left 600 EVDO/Area Scan (41x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.530 mW/g

Body Left 600 EVDO/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.0 V/m; Power Drift = -0.094 dB
Peak SAR (extrapolated) = 0.737 W/kg
SAR(1 g) = 0.438 mW/g; SAR(10 g) = 0.242 mW/g
Maximum value of SAR (measured) = 0.487 mW/g



0 dB = 0.487mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm

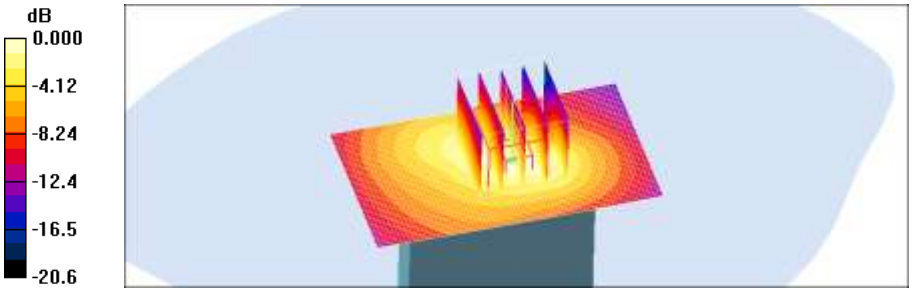
DUT: C811; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Body bottom 600 EVDO/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.395 mW/g

Body bottom 600 EVDO/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.3 V/m; Power Drift = 0.000 dB
Peak SAR (extrapolated) = 0.578 W/kg
SAR(1 g) = 0.357 mW/g; SAR(10 g) = 0.206 mW/g
Maximum value of SAR (measured) = 0.397 mW/g



0 dB = 0.397mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm
Option	Wireless Charging cover

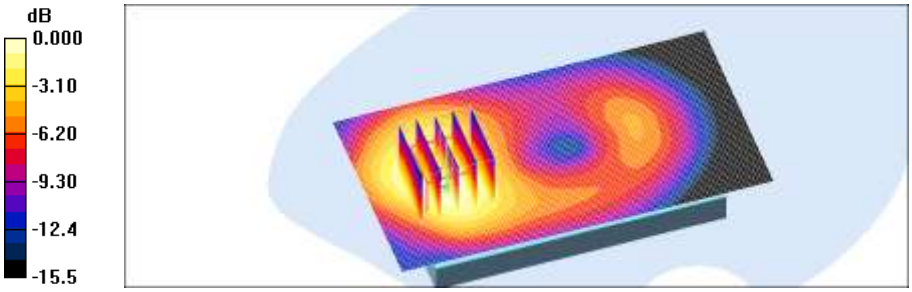
DUT: C811; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Body Front 600 EVDO Wireless cover/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.719 mW/g

Body Front 600 EVDO Wireless cover/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.6 V/m; Power Drift = -0.063 dB
Peak SAR (extrapolated) = 0.957 W/kg
SAR(1 g) = 0.676 mW/g; SAR(10 g) = 0.430 mW/g
Maximum value of SAR (measured) = 0.718 mW/g



0 dB = 0.718mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm
Option	Extended Battery

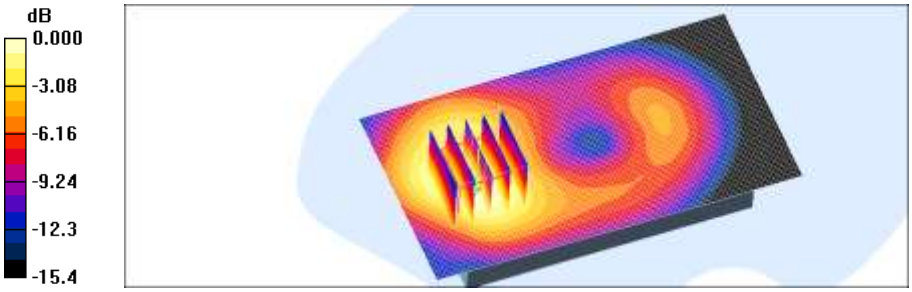
DUT: C811; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Body Front 600 EVDO Extended battery/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.723 mW/g

Body Front 600 EVDO Extended battery/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.5 V/m; Power Drift = -0.008 dB
Peak SAR (extrapolated) = 0.939 W/kg
SAR(1 g) = 0.669 mW/g; SAR(10 g) = 0.427 mW/g
Maximum value of SAR (measured) = 0.714 mW/g



0 dB = 0.714mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature: 21.3℃
Ambient Temperature: 21.5℃
Test Date: Jul.17, 2012
Separation Distance 1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:4.15
Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

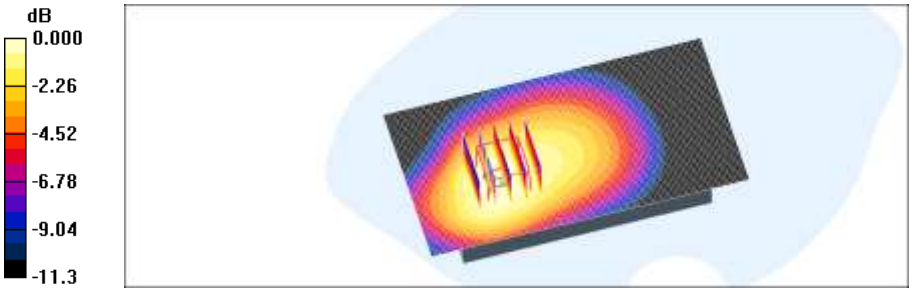
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Rear 190/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.535 mW/g

Body Rear 190/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.1 V/m; Power Drift = 0.004 dB
Peak SAR (extrapolated) = 0.670 W/kg
SAR(1 g) = 0.506 mW/g; SAR(10 g) = 0.364 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.532 mW/g



0 dB = 0.532mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul.17, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:4.15
Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

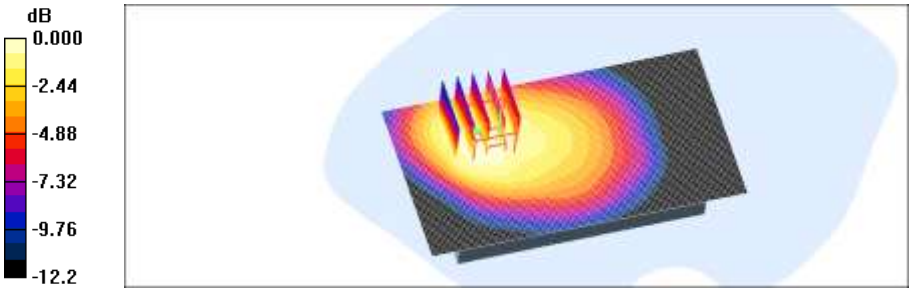
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front 190/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.537 mW/g

Body Front 190/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.0 V/m; Power Drift = 0.156 dB
Peak SAR (extrapolated) = 0.657 W/kg
SAR(1 g) = 0.527 mW/g; SAR(10 g) = 0.389 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.573 mW/g



0 dB = 0.573mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul.17, 2012
Separation Distance	1.0 cm

DUT: C811 (Side); Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:4.15
Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

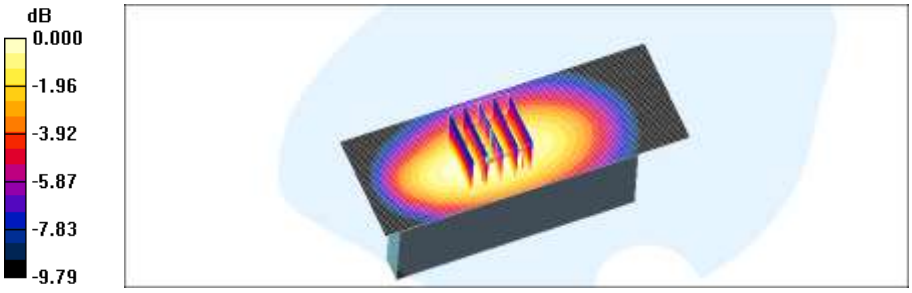
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Left 190/Area Scan (41x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.484 mW/g

Body Left 190/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.7 V/m; Power Drift = -0.135 dB
Peak SAR (extrapolated) = 0.578 W/kg
SAR(1 g) = 0.444 mW/g; SAR(10 g) = 0.317 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.473 mW/g



0 dB = 0.473mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul.17, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:4.15
Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

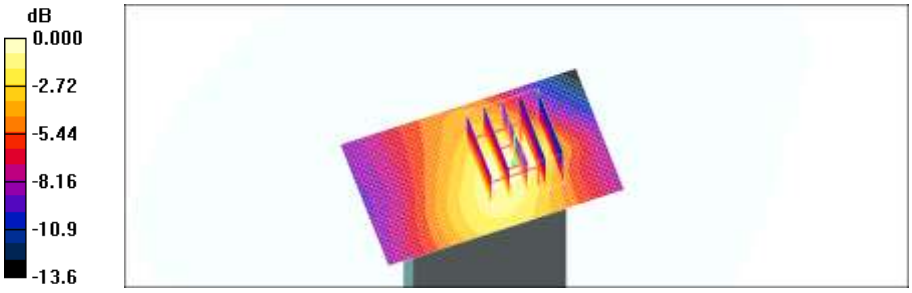
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body bottom 190/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.085 mW/g

Body bottom 190/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.18 V/m; Power Drift = -0.008 dB
Peak SAR (extrapolated) = 0.145 W/kg
SAR(1 g) = 0.079 mW/g; SAR(10 g) = 0.048 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.087 mW/g



0 dB = 0.087mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul.17, 2012
Separation Distance	1.0 cm
Option	Wireless Charging cover

DUT: C811; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:4.15
Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

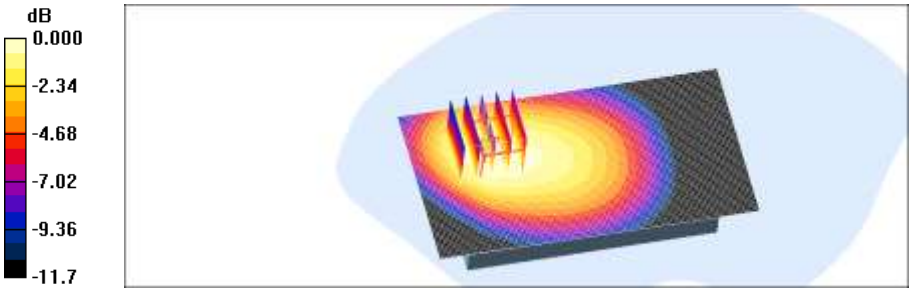
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front 190 wireless cover/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.451 mW/g

Body Front 190 wireless cover/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.7 V/m; Power Drift = -0.025 dB
Peak SAR (extrapolated) = 0.546 W/kg
SAR(1 g) = 0.426 mW/g; SAR(10 g) = 0.312 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.449 mW/g



0 dB = 0.449mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul.17, 2012
Separation Distance	1.0 cm
Option	Extended Battery

DUT: C811; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:4.15
Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

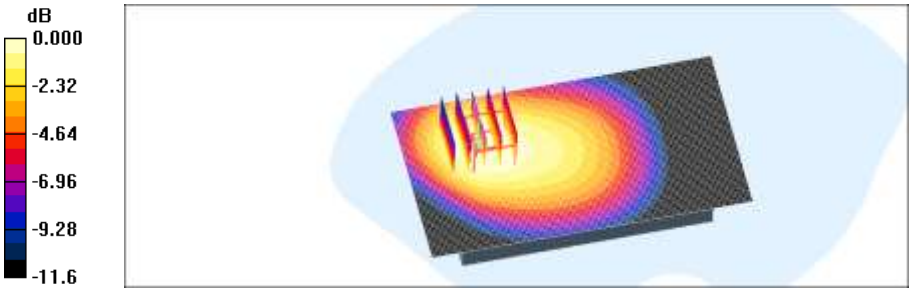
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front 190 Extended battery/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.463 mW/g

Body Front 190 Extended battery/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.8 V/m; Power Drift = -0.021 dB
Peak SAR (extrapolated) = 0.564 W/kg
SAR(1 g) = 0.439 mW/g; SAR(10 g) = 0.322 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.463 mW/g



0 dB = 0.463mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm

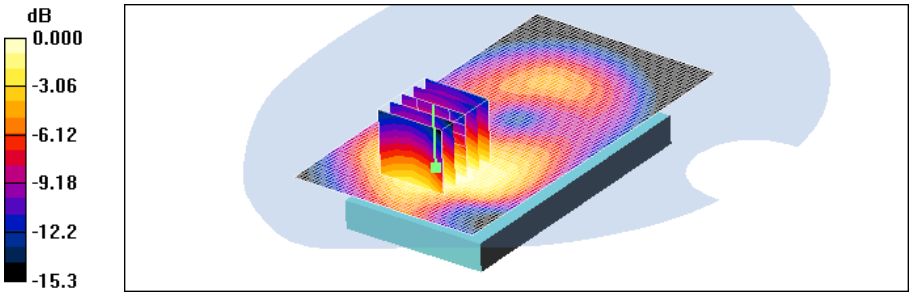
DUT: C811; Type: bar; Serial: #1

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Body Rear 661/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.591 mW/g

Body Rear 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.7 V/m; Power Drift = 0.019 dB
Peak SAR (extrapolated) = 0.784 W/kg
SAR(1 g) = 0.540 mW/g; SAR(10 g) = 0.349 mW/g
Maximum value of SAR (measured) = 0.582 mW/g



0 dB = 0.582mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm

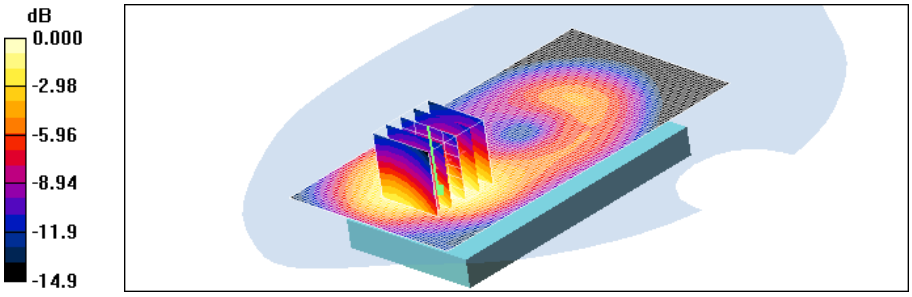
DUT: C811; Type: bar; Serial: #1

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Body Front 661/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.702 mW/g

Body Front 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.5 V/m; Power Drift = 0.044 dB
Peak SAR (extrapolated) = 0.885 W/kg
SAR(1 g) = 0.637 mW/g; SAR(10 g) = 0.403 mW/g
Maximum value of SAR (measured) = 0.690 mW/g



0 dB = 0.690mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm

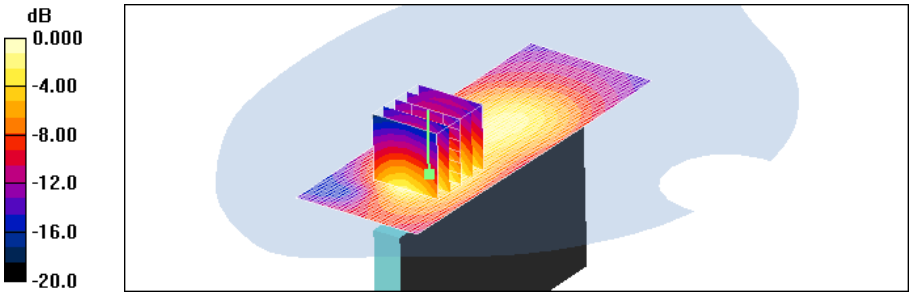
DUT: C811 (Side); Type: bar; Serial: #1

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Body Left 661/Area Scan (41x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.365 mW/g

Body Left 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.2 V/m; Power Drift = 0.018 dB
Peak SAR (extrapolated) = 0.554 W/kg
SAR(1 g) = 0.320 mW/g; SAR(10 g) = 0.173 mW/g
Maximum value of SAR (measured) = 0.336 mW/g



0 dB = 0.336mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm

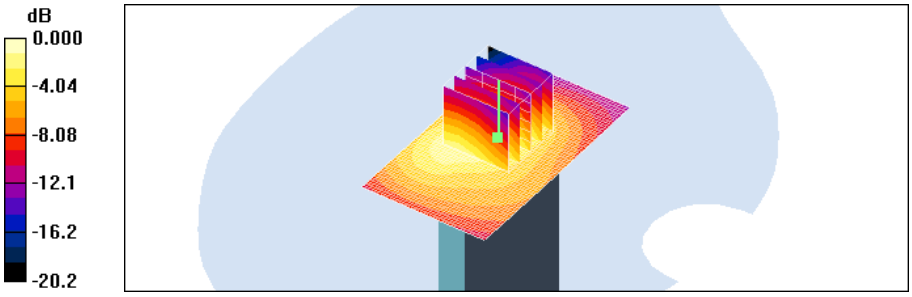
DUT: C811; Type: bar; Serial: #1

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Body bottom 661/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.316 mW/g

Body bottom 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.8 V/m; Power Drift = 0.140 dB
Peak SAR (extrapolated) = 0.460 W/kg
SAR(1 g) = 0.284 mW/g; SAR(10 g) = 0.166 mW/g
Maximum value of SAR (measured) = 0.317 mW/g



0 dB = 0.317mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm
Option	Wireless Charging cover

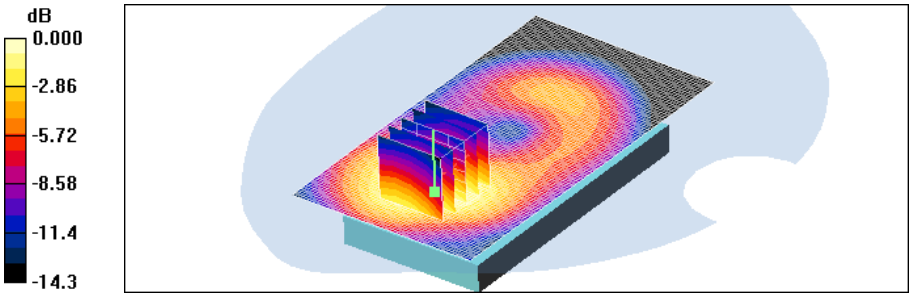
DUT: C811; Type: bar; Serial: #1

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Body Front 661 Wireless cover/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.509 mW/g

Body Front 661 Wireless cover/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.2 V/m; Power Drift = 0.115 dB
Peak SAR (extrapolated) = 0.666 W/kg
SAR(1 g) = 0.476 mW/g; SAR(10 g) = 0.302 mW/g
Maximum value of SAR (measured) = 0.520 mW/g



0 dB = 0.520mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm
Option	Extended Battery

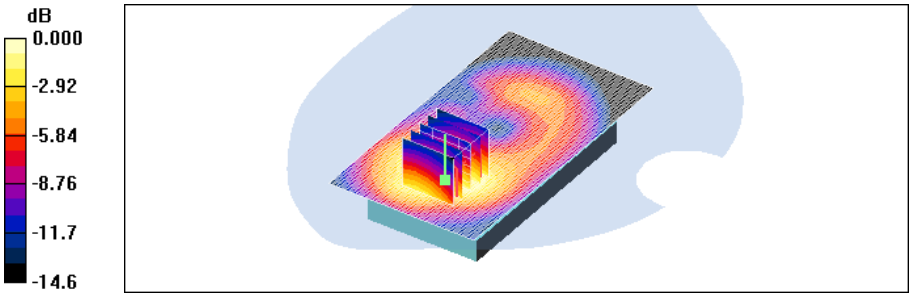
DUT: C811; Type: bar; Serial: #1

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Body Front 661 Extended battery/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.552 mW/g

Body Front 661 Extended battery/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.3 V/m; Power Drift = -0.042 dB
Peak SAR (extrapolated) = 0.926 W/kg
SAR(1 g) = 0.517 mW/g; SAR(10 g) = 0.322 mW/g
Maximum value of SAR (measured) = 0.555 mW/g



0 dB = 0.555mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 826.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.998 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

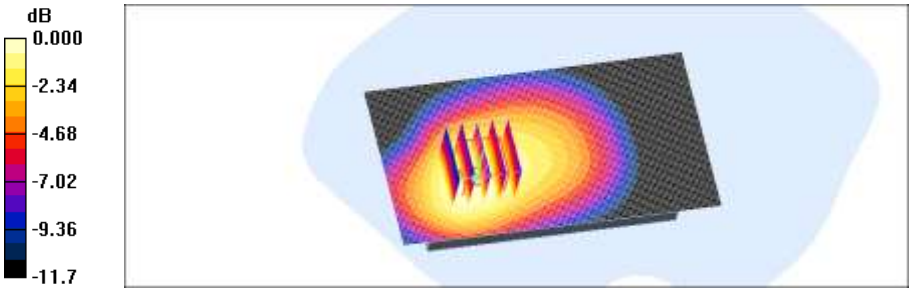
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Rear 4132/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.908 mW/g

Body Rear 4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.2 V/m; Power Drift = -0.123 dB
Peak SAR (extrapolated) = 1.19 W/kg
SAR(1 g) = 0.853 mW/g; SAR(10 g) = 0.597 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.897 mW/g



0 dB = 0.897mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

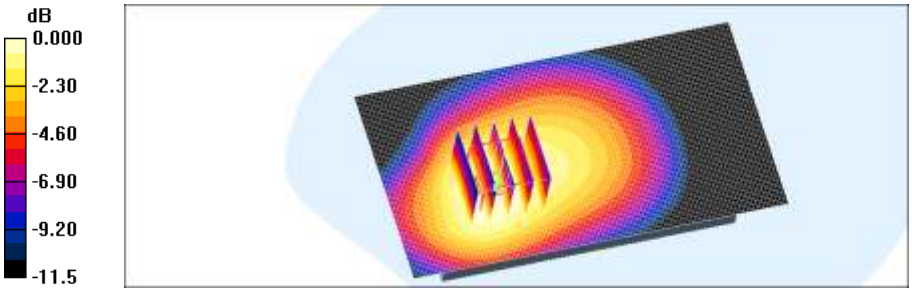
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Rear 4183/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.02 mW/g

Body Rear 4183/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.7 V/m; Power Drift = -0.125 dB
Peak SAR (extrapolated) = 1.30 W/kg
SAR(1 g) = 0.953 mW/g; SAR(10 g) = 0.674 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.000 mW/g



0 dB = 1.00mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 846.6 MHz; σ = 1.02 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

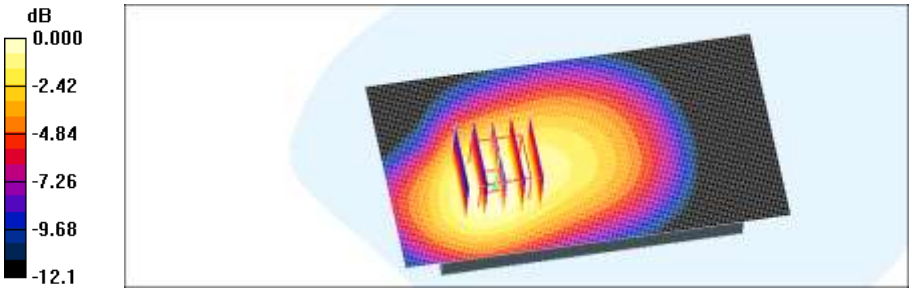
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Rear 4233/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Body Rear 4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.1 V/m; Power Drift = -0.035 dB
Peak SAR (extrapolated) = 1.11 W/kg
SAR(1 g) = 0.809 mW/g; SAR(10 g) = 0.570 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.870 mW/g
Maximum value of SAR (measured) = 0.859 mW/g



0 dB = 0.859mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 826.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.998 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

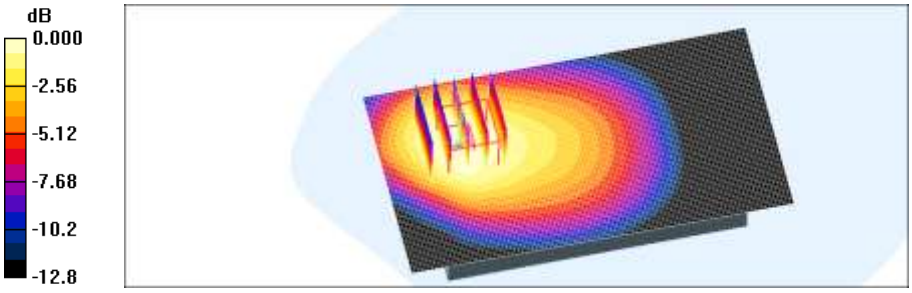
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front 4132/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.09 mW/g

Body Front 4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.6 V/m; Power Drift = 0.086 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.706 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.08 mW/g



0 dB = 1.08mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

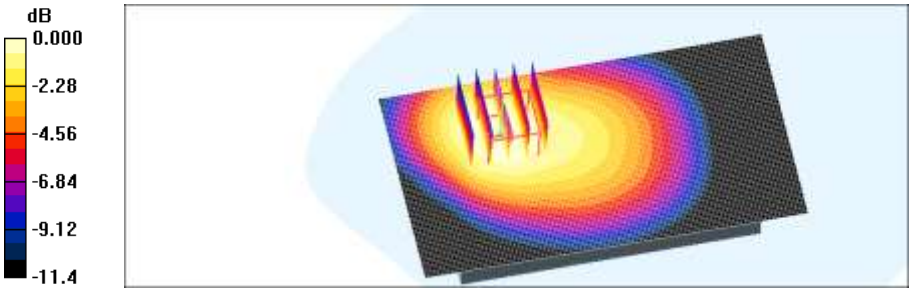
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front 4183/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.993 mW/g

Body Front 4183/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.2 V/m; Power Drift = -0.022 dB
Peak SAR (extrapolated) = 1.20 W/kg
SAR(1 g) = 0.920 mW/g; SAR(10 g) = 0.661 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.980 mW/g



0 dB = 0.980mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 846.6 MHz; σ = 1.02 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

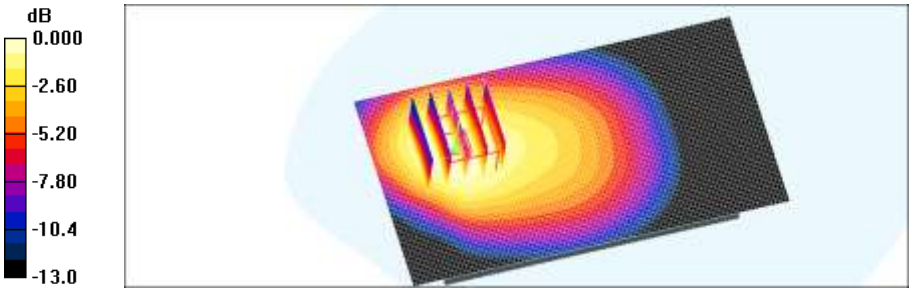
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front 4233/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.05 mW/g

Body Front 4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.0 V/m; Power Drift = 0.042 dB
Peak SAR (extrapolated) = 1.31 W/kg
SAR(1 g) = 0.981 mW/g; SAR(10 g) = 0.690 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.05 mW/g



0 dB = 1.05mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm

DUT: C811 (Side); Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

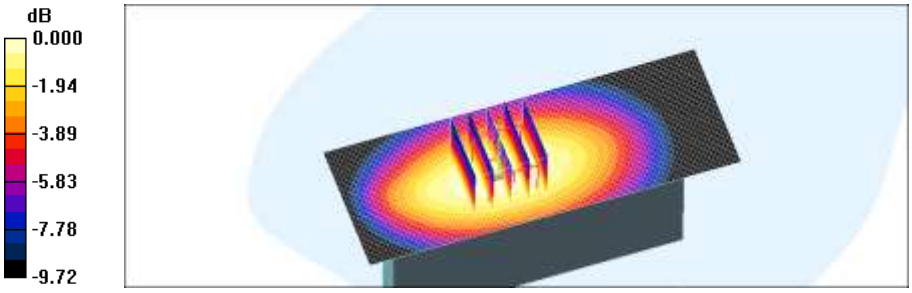
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Left 4183/Area Scan (41x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.687 mW/g

Body Left 4183/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.0 V/m; Power Drift = -0.079 dB
Peak SAR (extrapolated) = 0.830 W/kg
SAR(1 g) = 0.633 mW/g; SAR(10 g) = 0.447 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.678 mW/g



0 dB = 0.678mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

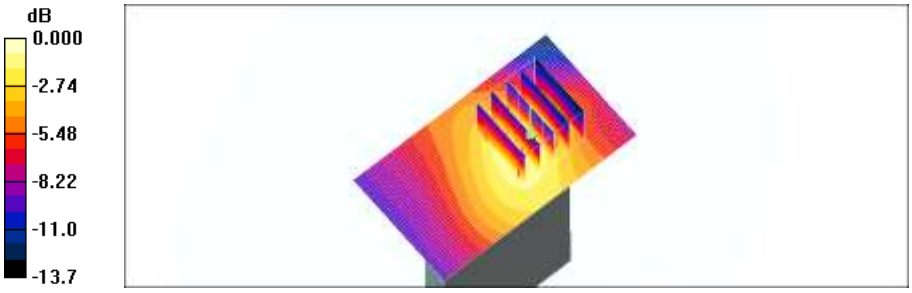
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body bottom 4183/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.154 mW/g

Body bottom 4183/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.2 V/m; Power Drift = -0.049 dB
Peak SAR (extrapolated) = 0.263 W/kg
SAR(1 g) = 0.139 mW/g; SAR(10 g) = 0.082 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.151 mW/g



0 dB = 0.151mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm
Option	Wireless Charging cover

DUT: C811; Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 826.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.998 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

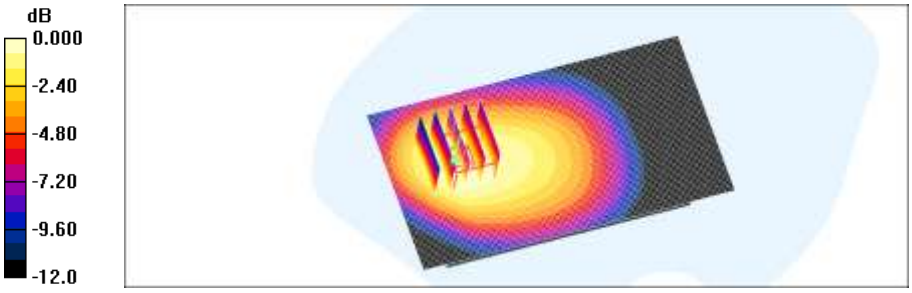
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front Wireless Cover 4132/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.811 mW/g

Body Front Wireless Cover 4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.7 V/m; Power Drift = -0.058 dB
Peak SAR (extrapolated) = 0.986 W/kg
SAR(1 g) = 0.750 mW/g; SAR(10 g) = 0.540 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.799 mW/g



0 dB = 0.799mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm
Option	Extended Battery

DUT: C811; Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 826.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.998 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

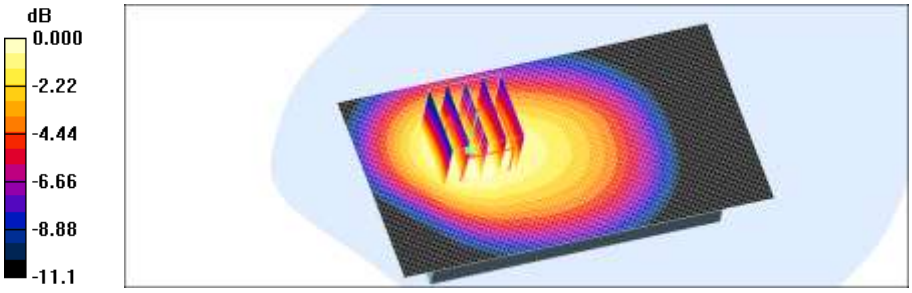
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front Extend Battery 4132/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.785 mW/g

Body Front Extend Battery 4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.3 V/m; Power Drift = -0.050 dB
Peak SAR (extrapolated) = 0.955 W/kg
SAR(1 g) = 0.731 mW/g; SAR(10 g) = 0.525 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.777 mW/g



0 dB = 0.777mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm

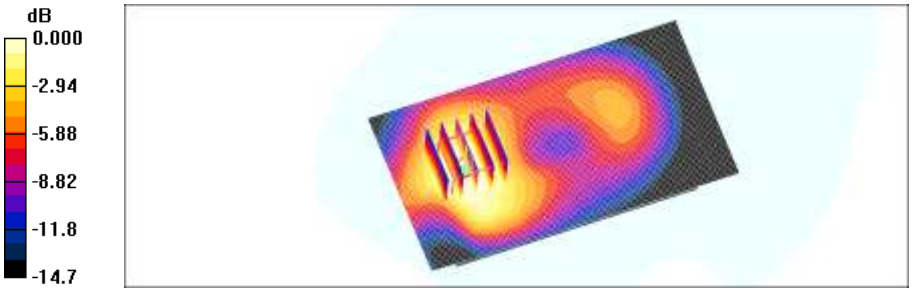
DUT: C811; Type: bar; Serial: #1

Communication System: WCDMA1900; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 835/900 Phamtom ; Type: SAM

Body Rear 9400/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.619 mW/g

Body Rear 9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.9 V/m; Power Drift = 0.013 dB
Peak SAR (extrapolated) = 0.801 W/kg
SAR(1 g) = 0.557 mW/g; SAR(10 g) = 0.365 mW/g
Maximum value of SAR (measured) = 0.600 mW/g



0 dB = 0.600mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm

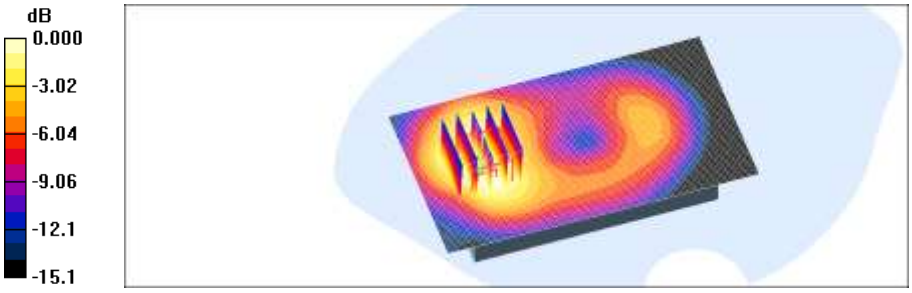
DUT: C811; Type: bar; Serial: #1

Communication System: WCDMA1900; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Body Front 9400/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.763 mW/g

Body Front 9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.3 V/m; Power Drift = -0.002 dB
Peak SAR (extrapolated) = 0.954 W/kg
SAR(1 g) = 0.677 mW/g; SAR(10 g) = 0.427 mW/g
Maximum value of SAR (measured) = 0.738 mW/g



0 dB = 0.738mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm

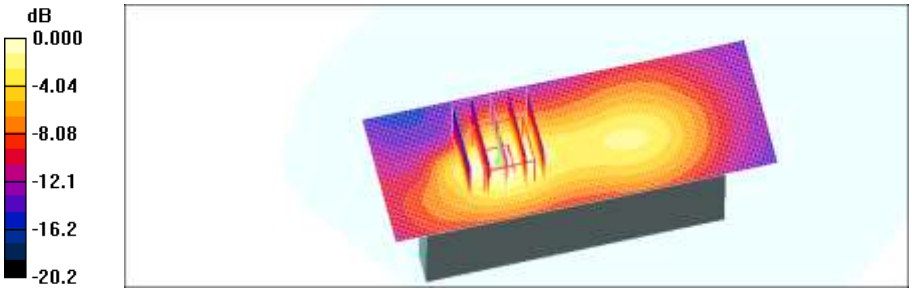
DUT: C811 (Side); Type: bar; Serial: #1

Communication System: WCDMA1900; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Body Left 9400/Area Scan (41x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.460 mW/g

Body Left 9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.0 V/m; Power Drift = -0.036 dB
Peak SAR (extrapolated) = 0.600 W/kg
SAR(1 g) = 0.364 mW/g; SAR(10 g) = 0.203 mW/g
Maximum value of SAR (measured) = 0.404 mW/g



0 dB = 0.404mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm

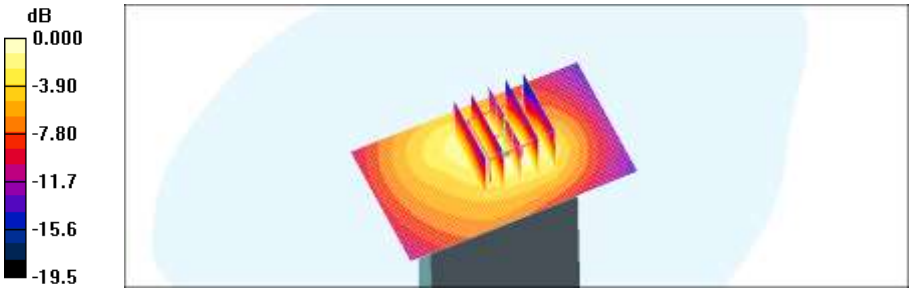
DUT: C811; Type: bar; Serial: #1

Communication System: WCDMA1900; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Body bottom 9400/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.322 mW/g

Body bottom 9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.4 V/m; Power Drift = 0.065 dB
Peak SAR (extrapolated) = 0.473 W/kg
SAR(1 g) = 0.294 mW/g; SAR(10 g) = 0.170 mW/g
Maximum value of SAR (measured) = 0.328 mW/g



0 dB = 0.328mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm
Option	Wireless Charging cover

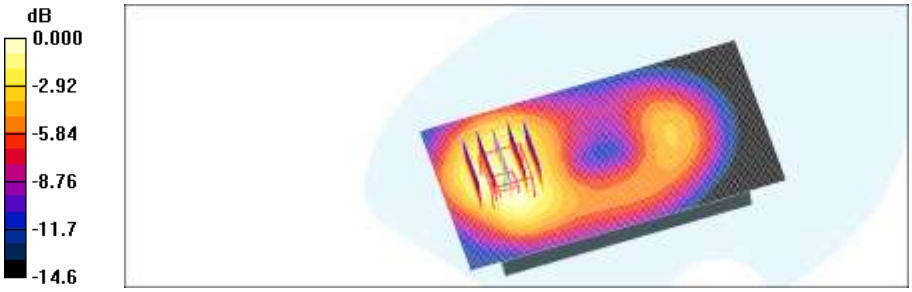
DUT: C811; Type: bar; Serial: #1

Communication System: WCDMA1900; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Body Front 9400 Wireless cover/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.621 mW/g

Body Front 9400 Wireless cover/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.5 V/m; Power Drift = -0.133 dB
Peak SAR (extrapolated) = 0.782 W/kg
SAR(1 g) = 0.556 mW/g; SAR(10 g) = 0.352 mW/g
Maximum value of SAR (measured) = 0.596 mW/g



0 dB = 0.596mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm
Option	Extended Battery

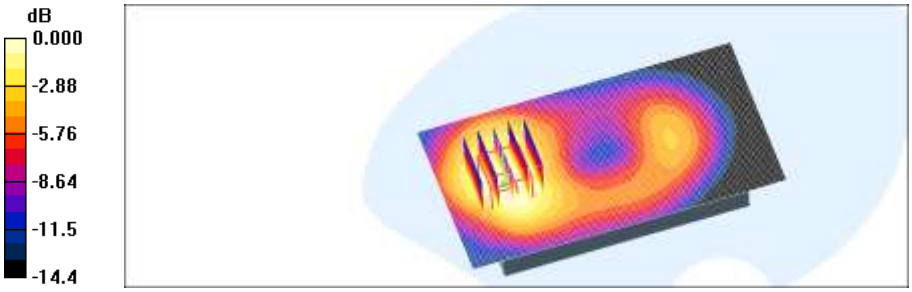
DUT: C811; Type: bar; Serial: #1

Communication System: WCDMA1900; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Body Front 9400 Extended battery/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.611 mW/g

Body Front 9400 Extended battery/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.3 V/m; Power Drift = 0.057 dB
Peak SAR (extrapolated) = 0.775 W/kg
SAR(1 g) = 0.551 mW/g; SAR(10 g) = 0.350 mW/g
Maximum value of SAR (measured) = 0.592 mW/g



0 dB = 0.592mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

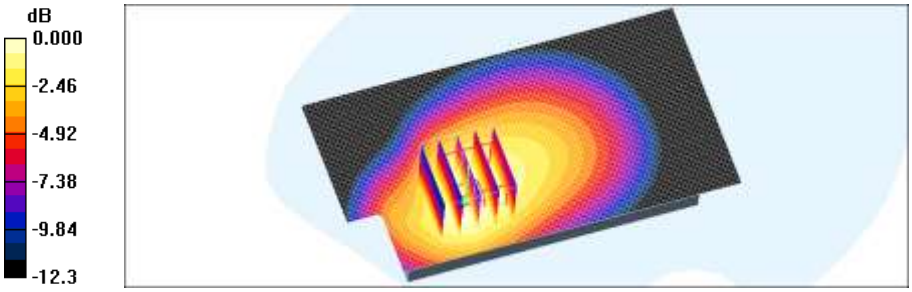
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Rear QPSK 10MHz 25RB 13 offset 23230/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.515 mW/g

Body Rear QPSK 10MHz 25RB 13 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.0 V/m; Power Drift = -0.128 dB
Peak SAR (extrapolated) = 0.695 W/kg
SAR(1 g) = 0.483 mW/g; SAR(10 g) = 0.334 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.517 mW/g



0 dB = 0.517mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

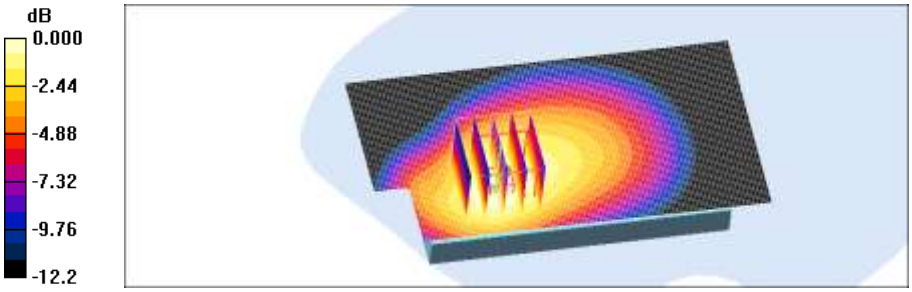
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Rear QPSK 10MHz 1RB 0 offset 23230/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.543 mW/g

Body Rear QPSK 10MHz 1RB 0 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.5 V/m; Power Drift = -0.036 dB
Peak SAR (extrapolated) = 0.743 W/kg
SAR(1 g) = 0.519 mW/g; SAR(10 g) = 0.359 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.556 mW/g



0 dB = 0.556mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

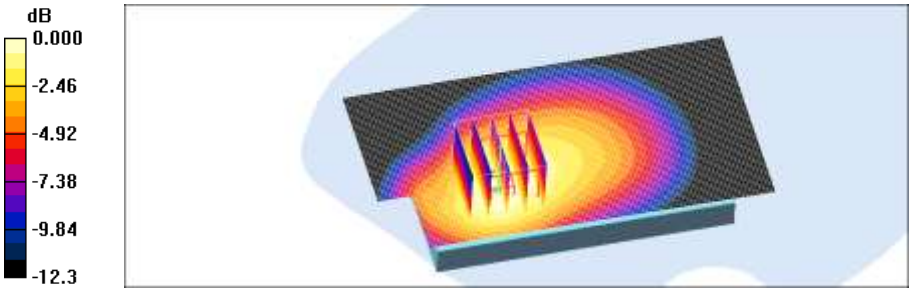
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Rear QPSK 10MHz 1RB 49 offset 23230/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.520 mW/g

Body Rear QPSK 10MHz 1RB 49 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.1 V/m; Power Drift = -0.012 dB
Peak SAR (extrapolated) = 0.700 W/kg
SAR(1 g) = 0.489 mW/g; SAR(10 g) = 0.338 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.526 mW/g



0 dB = 0.526mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

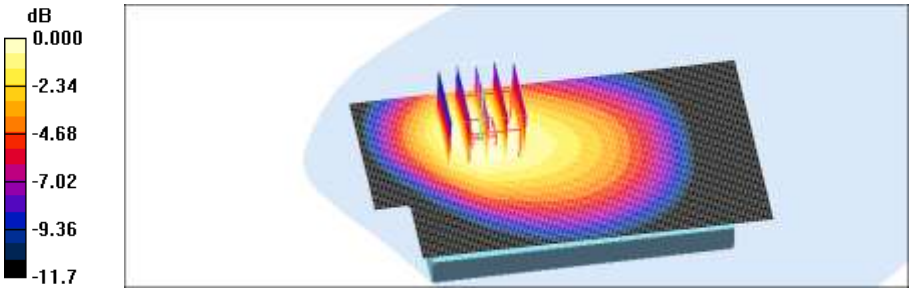
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front QPSK 10MHz 25RB 13 offset 23230/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.484 mW/g

Body Front QPSK 10MHz 25RB 13 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.94 V/m; Power Drift = 0.002 dB
Peak SAR (extrapolated) = 0.624 W/kg
SAR(1 g) = 0.453 mW/g; SAR(10 g) = 0.322 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.482 mW/g



0 dB = 0.482mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

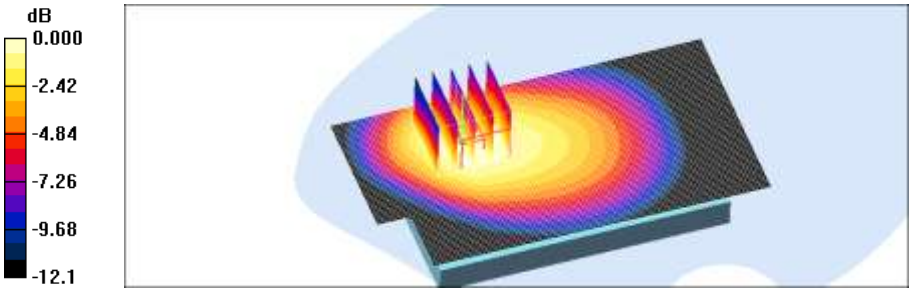
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front QPSK 10MHz 1RB 0 offset 23230/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.521 mW/g

Body Front QPSK 10MHz 1RB 0 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.2 V/m; Power Drift = 0.067 dB
Peak SAR (extrapolated) = 0.672 W/kg
SAR(1 g) = 0.493 mW/g; SAR(10 g) = 0.350 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.523 mW/g



0 dB = 0.523mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

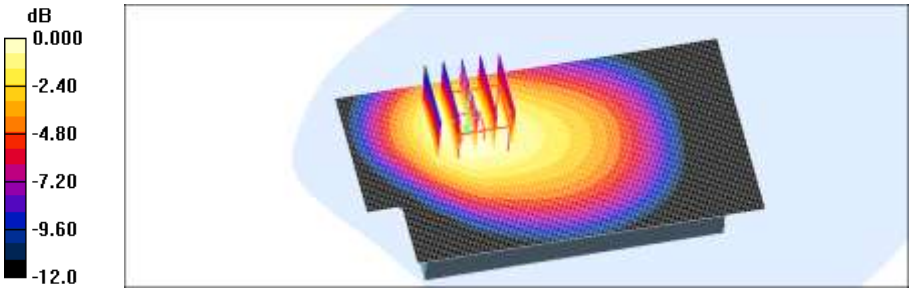
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front QPSK 10MHz 1RB 49 offset 23230/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.490 mW/g

Body Front QPSK 10MHz 1RB 49 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.1 V/m; Power Drift = 0.010 dB
Peak SAR (extrapolated) = 0.635 W/kg
SAR(1 g) = 0.465 mW/g; SAR(10 g) = 0.330 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.495 mW/g



0 dB = 0.495mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

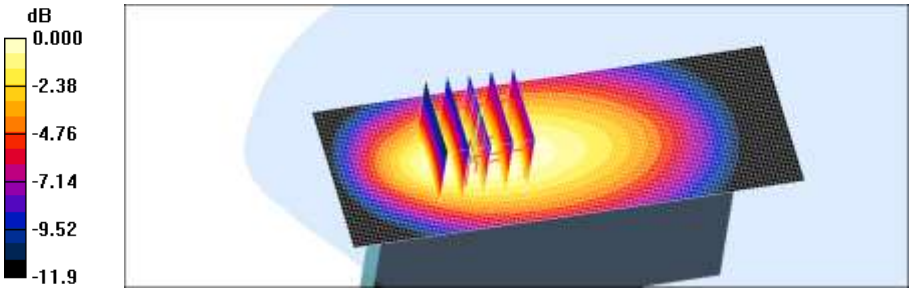
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body left QPSK 10MHz 25RB 13 offset 23230/Area Scan (41x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.390 mW/g

Body left QPSK 10MHz 25RB 13 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.8 V/m; Power Drift = -0.026 dB
Peak SAR (extrapolated) = 0.512 W/kg
SAR(1 g) = 0.352 mW/g; SAR(10 g) = 0.238 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.375 mW/g



0 dB = 0.375mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

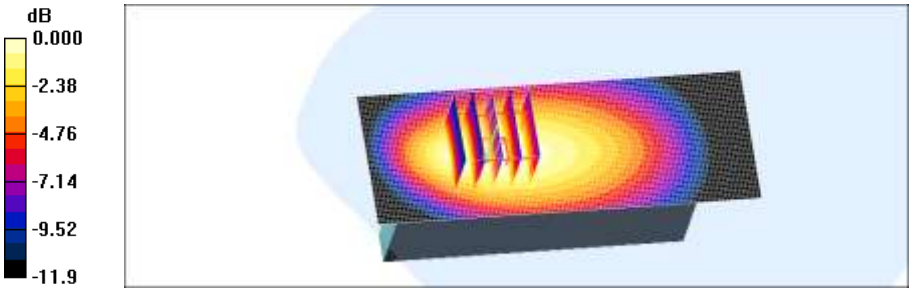
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body left QPSK 10MHz 1RB 0 offset 23230/Area Scan (41x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.414 mW/g

Body left QPSK 10MHz 1RB 0 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.2 V/m; Power Drift = -0.104 dB
Peak SAR (extrapolated) = 0.548 W/kg
SAR(1 g) = 0.375 mW/g; SAR(10 g) = 0.254 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.404 mW/g



0 dB = 0.404mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

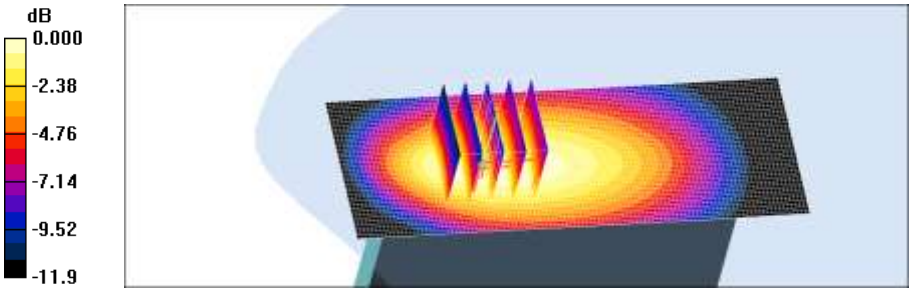
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body left QPSK 10MHz 1RB 49 offset 23230/Area Scan (41x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.383 mW/g

Body left QPSK 10MHz 1RB 49 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.9 V/m; Power Drift = 0.052 dB
Peak SAR (extrapolated) = 0.511 W/kg
SAR(1 g) = 0.353 mW/g; SAR(10 g) = 0.239 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.380 mW/g



0 dB = 0.380mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

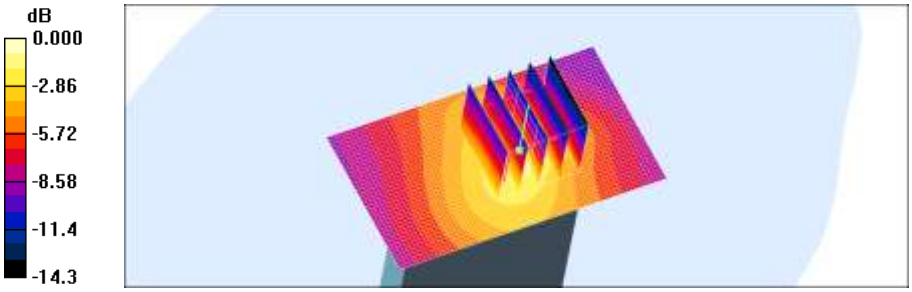
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Bottom QPSK 10MHz 25RB 13 offset 23230/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.083 mW/g

Body Bottom QPSK 10MHz 25RB 13 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.87 V/m; Power Drift = 0.060 dB
Peak SAR (extrapolated) = 0.179 W/kg
SAR(1 g) = 0.080 mW/g; SAR(10 g) = 0.043 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.087 mW/g



0 dB = 0.087mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

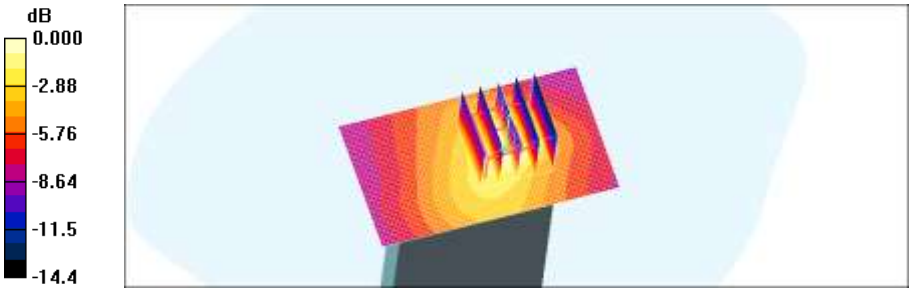
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Bottom QPSK 10MHz 1RB 0 offset 23230/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.087 mW/g

Body Bottom QPSK 10MHz 1RB 0 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.05 V/m; Power Drift = -0.089 dB
Peak SAR (extrapolated) = 0.189 W/kg
SAR(1 g) = 0.085 mW/g; SAR(10 g) = 0.046 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.094 mW/g



0 dB = 0.094mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

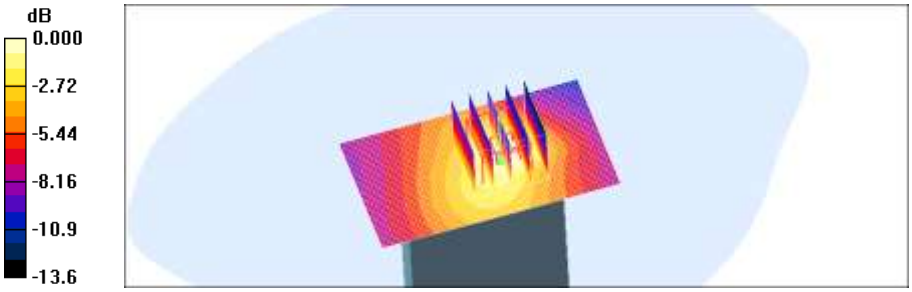
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Bottom QPSK 10MHz 1RB 49 offset 23230/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.081 mW/g

Body Bottom QPSK 10MHz 1RB 49 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.82 V/m; Power Drift = -0.046 dB
Peak SAR (extrapolated) = 0.165 W/kg
SAR(1 g) = 0.077 mW/g; SAR(10 g) = 0.043 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.080 mW/g



0 dB = 0.080mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm
Option	Wireless Charging cover

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

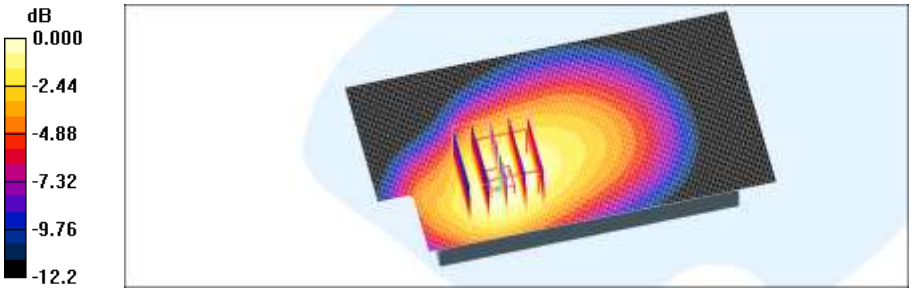
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Rear QPSK 10MHz 1RB 0 offset 23230 Wireless Cover/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.545 mW/g

Body Rear QPSK 10MHz 1RB 0 offset 23230 Wireless Cover/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.3 V/m; Power Drift = 0.063 dB
Peak SAR (extrapolated) = 0.733 W/kg
SAR(1 g) = 0.511 mW/g; SAR(10 g) = 0.355 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.546 mW/g



0 dB = 0.546mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm
Option	Extended Battery

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

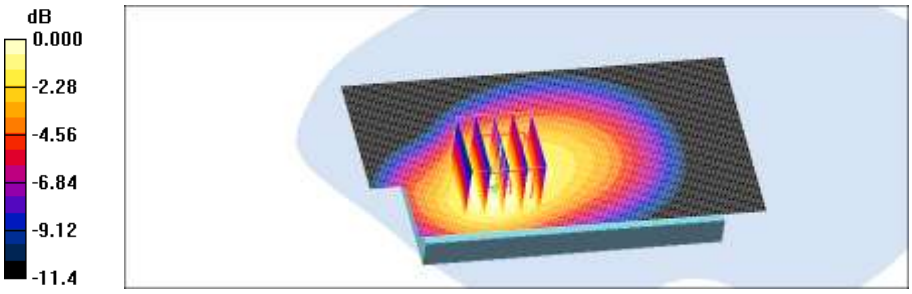
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Rear QPSK 10MHz 1RB 0 offset 23230 Extended Battery/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.459 mW/g

Body Rear QPSK 10MHz 1RB 0 offset 23230 Extended Battery/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.40 V/m; Power Drift = -0.033 dB
Peak SAR (extrapolated) = 0.604 W/kg
SAR(1 g) = 0.431 mW/g; SAR(10 g) = 0.301 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.461 mW/g



0 dB = 0.461mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

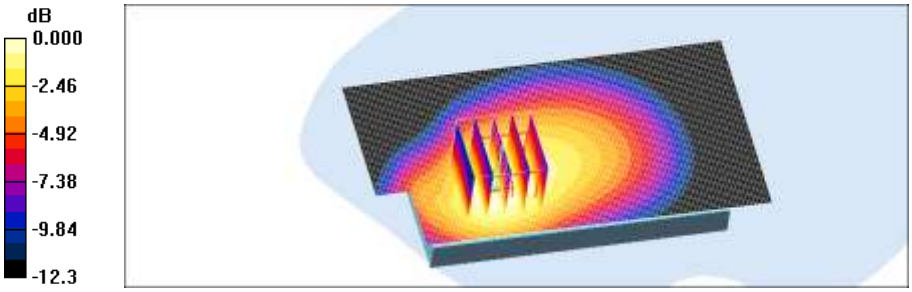
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Rear 16 QAM 10MHz 25RB 13 offset 23230/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.402 mW/g

Body Rear 16 QAM 10MHz 25RB 13 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.82 V/m; Power Drift = 0.004 dB
Peak SAR (extrapolated) = 0.545 W/kg
SAR(1 g) = 0.378 mW/g; SAR(10 g) = 0.261 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.405 mW/g



0 dB = 0.405mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

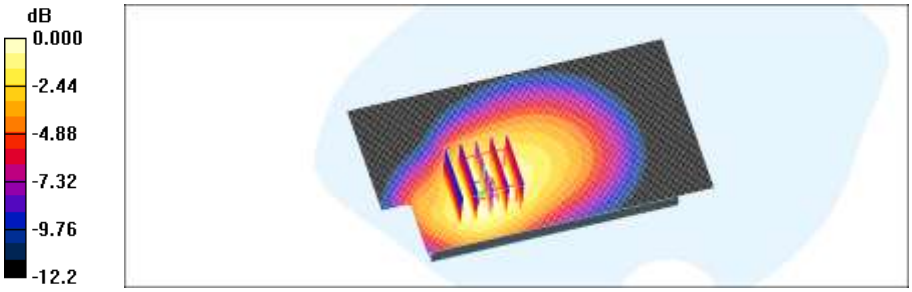
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Rear 16QAM 10MHz 1RB 0 offset 23230/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.529 mW/g

Body Rear 16QAM 10MHz 1RB 0 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.2 V/m; Power Drift = -0.023 dB
Peak SAR (extrapolated) = 0.712 W/kg
SAR(1 g) = 0.500 mW/g; SAR(10 g) = 0.346 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.536 mW/g



0 dB = 0.536mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

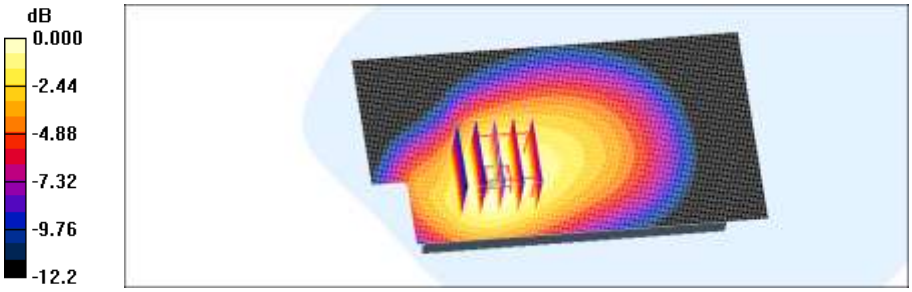
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Rear 16QAM 10MHz 1RB 49 offset 23230/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.504 mW/g

Body Rear 16QAM 10MHz 1RB 49 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.00 V/m; Power Drift = -0.019 dB
Peak SAR (extrapolated) = 0.677 W/kg
SAR(1 g) = 0.471 mW/g; SAR(10 g) = 0.328 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.503 mW/g



0 dB = 0.503mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

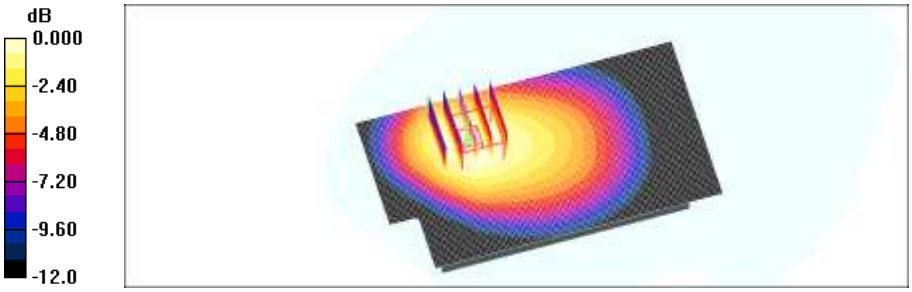
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front 16QAM 10MHz 25RB 13 offset 23230/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.373 mW/g

Body Front 16QAM 10MHz 25RB 13 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.71 V/m; Power Drift = 0.052 dB
Peak SAR (extrapolated) = 0.481 W/kg
SAR(1 g) = 0.351 mW/g; SAR(10 g) = 0.250 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.375 mW/g



0 dB = 0.375mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

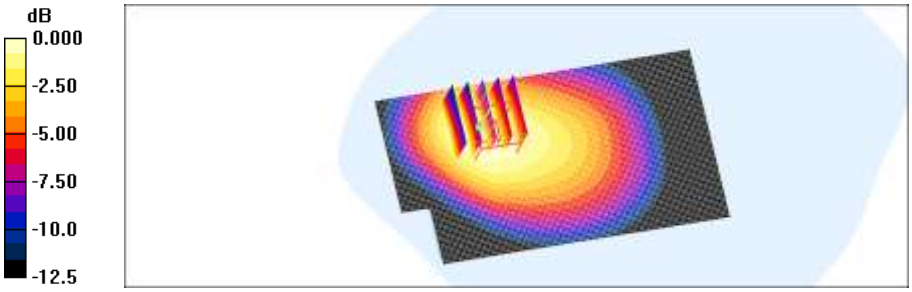
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front 16QAM 10MHz 1RB 0 offset 23230/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.504 mW/g

Body Front 16QAM 10MHz 1RB 0 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.2 V/m; Power Drift = 0.030 dB
Peak SAR (extrapolated) = 0.659 W/kg
SAR(1 g) = 0.479 mW/g; SAR(10 g) = 0.340 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.502 mW/g



0 dB = 0.502mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

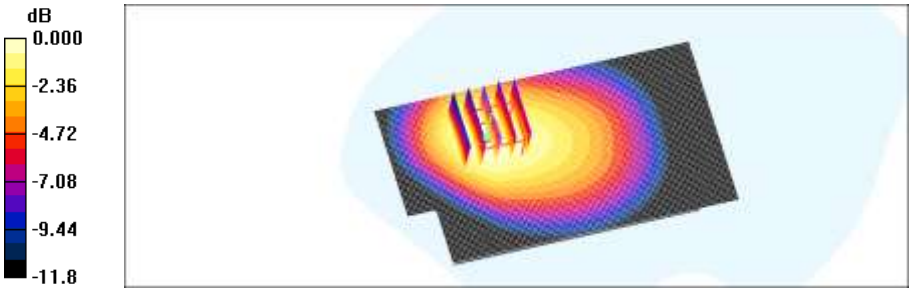
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front 16QAM 10MHz 1RB 49 offset 23230/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.483 mW/g

Body Front 16QAM 10MHz 1RB 49 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.1 V/m; Power Drift = 0.016 dB
Peak SAR (extrapolated) = 0.617 W/kg
SAR(1 g) = 0.454 mW/g; SAR(10 g) = 0.324 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.483 mW/g



0 dB = 0.483mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

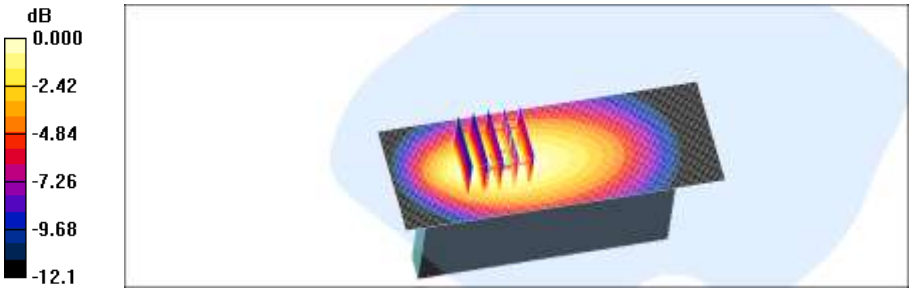
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body left 16QAM 10MHz 25RB 13 offset 23230/Area Scan (41x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.296 mW/g

Body left 16QAM 10MHz 25RB 13 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.53 V/m; Power Drift = -0.032 dB
Peak SAR (extrapolated) = 0.399 W/kg
SAR(1 g) = 0.275 mW/g; SAR(10 g) = 0.185 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.296 mW/g



0 dB = 0.296mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

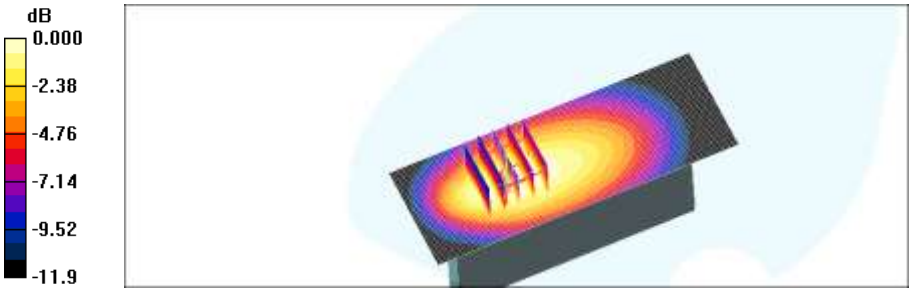
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body left 16QAM 10MHz 1RB 0 offset 23230/Area Scan (41x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.408 mW/g

Body left 16QAM 10MHz 1RB 0 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.0 V/m; Power Drift = -0.041 dB
Peak SAR (extrapolated) = 0.551 W/kg
SAR(1 g) = 0.373 mW/g; SAR(10 g) = 0.253 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.399 mW/g



0 dB = 0.399mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

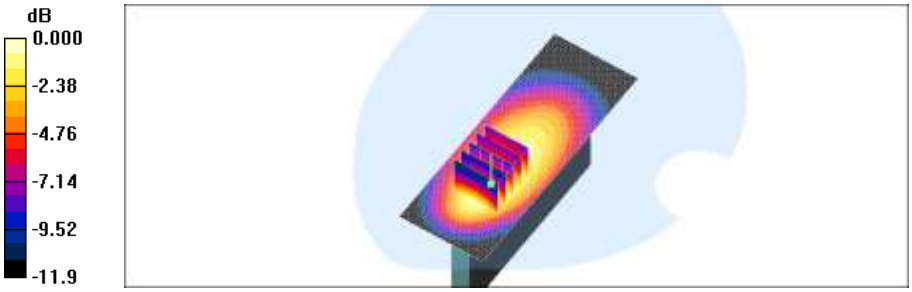
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body left 16QAM 10MHz 1RB 49 offset 23230/Area Scan (41x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.385 mW/g

Body left 16QAM 10MHz 1RB 49 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.9 V/m; Power Drift = -0.042 dB
Peak SAR (extrapolated) = 0.514 W/kg
SAR(1 g) = 0.353 mW/g; SAR(10 g) = 0.239 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.378 mW/g



0 dB = 0.378mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature: 21.3℃
Ambient Temperature: 21.5℃
Test Date: Jul. 11, 2012
Separation Distance 1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

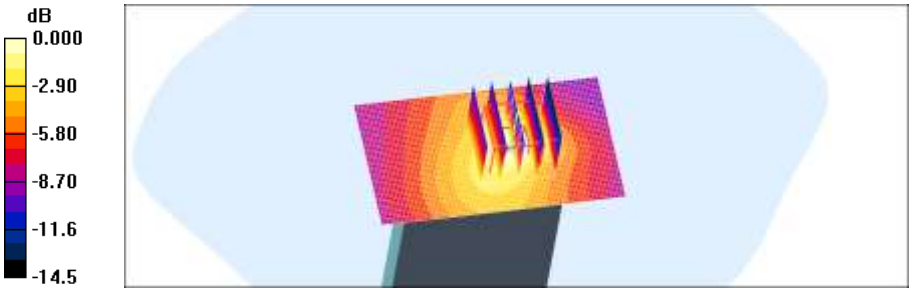
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Bottom 16QAM 10MHz 25RB 13 offset 23230/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.066 mW/g

Body Bottom 16QAM 10MHz 25RB 13 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.00 V/m; Power Drift = -0.014 dB
Peak SAR (extrapolated) = 0.142 W/kg
SAR(1 g) = 0.063 mW/g; SAR(10 g) = 0.034 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.068 mW/g



0 dB = 0.068mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

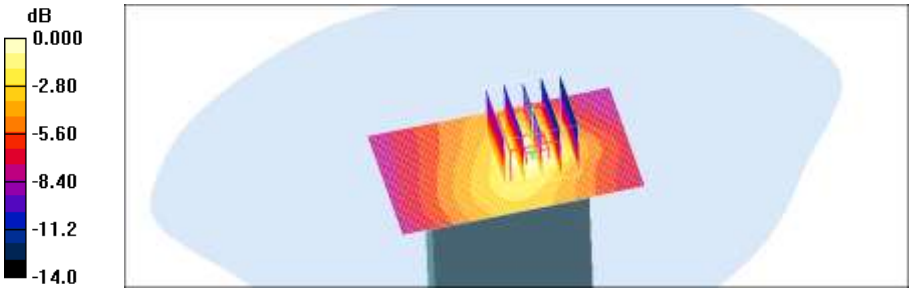
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Bottom 16QAM 10MHz 1RB 0 offset 23230/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.081 mW/g

Body Bottom 16QAM 10MHz 1RB 0 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.70 V/m; Power Drift = -0.016 dB
Peak SAR (extrapolated) = 0.168 W/kg
SAR(1 g) = 0.078 mW/g; SAR(10 g) = 0.044 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.085 mW/g



0 dB = 0.085mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 11, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

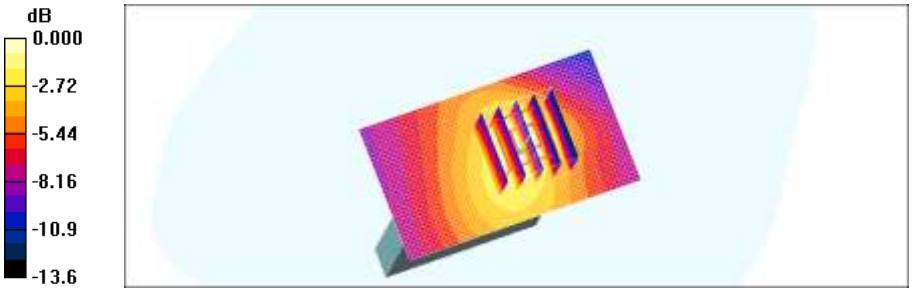
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Bottom 16QAM 10MHz 1RB 49 offset 23230/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.079 mW/g

Body Bottom 16QAM 10MHz 1RB 49 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.73 V/m; Power Drift = -0.026 dB
Peak SAR (extrapolated) = 0.164 W/kg
SAR(1 g) = 0.076 mW/g; SAR(10 g) = 0.042 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.079 mW/g



0 dB = 0.079mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	Jul. 22, 2012
Separation Distance	1.0 cm

DUT: C811; Type: Bar; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.96 mho/m; ε_r = 51.7; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

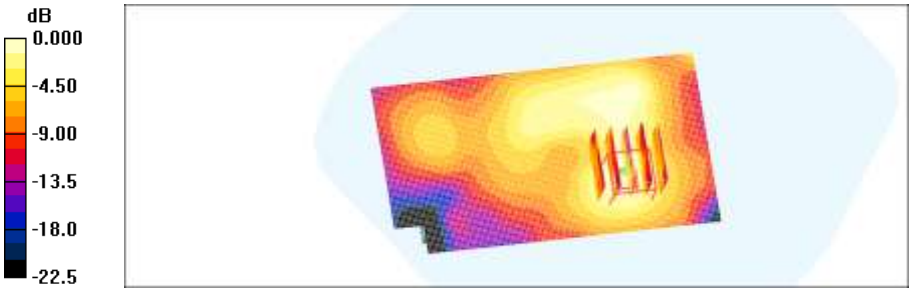
DASY4 Configuration:
- Probe: ET3DV6 - SN1630; ConvF(4.3, 4.3, 4.3); Calibrated: 2011-11-18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: 800/900 Phantom; Type: SAM

802.11b Hotspot rear 1Mbps 11ch/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

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

802.11b Hotspot rear 1Mbps 11ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.47 V/m; Power Drift = -0.041 dB
Peak SAR (extrapolated) = 0.176 W/kg
SAR(1 g) = 0.050 mW/g; SAR(10 g) = 0.019 mW/g

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



0 dB = 0.055mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature: 21.1℃
Ambient Temperature: 21.3℃
Test Date: Jul. 22, 2012
Separation Distance 1.0 cm

DUT: C811; Type: Bar; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.96 mho/m; ε_r = 51.7; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

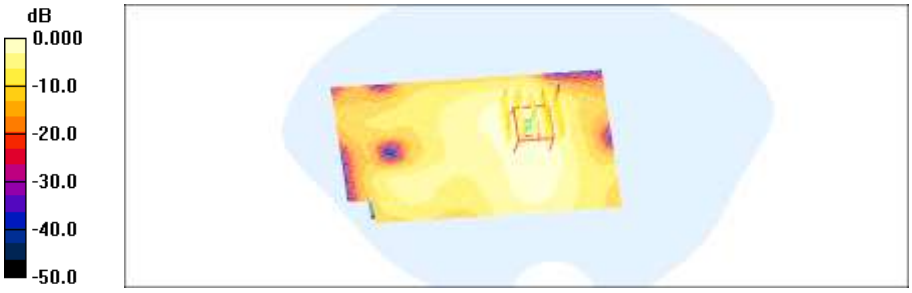
DASY4 Configuration:
- Probe: ET3DV6 - SN1630; ConvF(4.3, 4.3, 4.3); Calibrated: 2011-11-18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: 800/900 Phantom; Type: SAM

802.11b Hotspot Front 1Mbps 11ch/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.051 mW/g

802.11b Hotspot Front 1Mbps 11ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.11 V/m; Power Drift = 0.147 dB
Peak SAR (extrapolated) = 0.077 W/kg
SAR(1 g) = 0.045 mW/g; SAR(10 g) = 0.025 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.050 mW/g



0 dB = 0.050mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	Jul. 22, 2012
Separation Distance	1.0 cm

DUT: C811; Type: Bar; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.96 mho/m; ε_r = 51.7; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

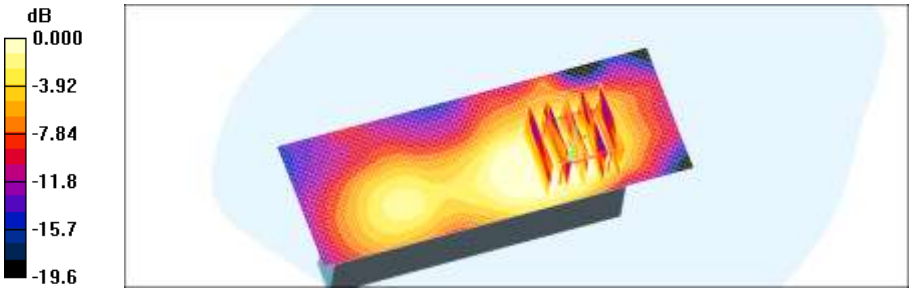
DASY4 Configuration:
- Probe: ET3DV6 - SN1630; ConvF(4.3, 4.3, 4.3); Calibrated: 2011-11-18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: 800/900 Phantom; Type: SAM

802.11b Hotspot Right side 1Mbps 11ch/Area Scan (41x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.058 mW/g

802.11b Hotspot Right side 1Mbps 11ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.55 V/m; Power Drift = -0.087 dB
Peak SAR (extrapolated) = 0.163 W/kg
SAR(1 g) = 0.041 mW/g; SAR(10 g) = 0.018 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.038 mW/g



0 dB = 0.038mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	Jul. 22, 2012
Separation Distance	1.0 cm

DUT: C811; Type: Bar; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.96 mho/m; ε_r = 51.7; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

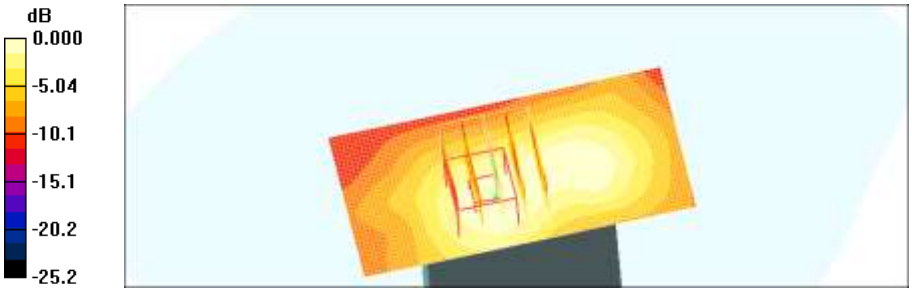
DASY4 Configuration:
- Probe: ET3DV6 - SN1630; ConvF(4.3, 4.3, 4.3); Calibrated: 2011-11-18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: 800/900 Phantom; Type: SAM

802.11b Hotspot Top side 1Mbps 11ch/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.036 mW/g

802.11b Hotspot Top side 1Mbps 11ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.90 V/m; Power Drift = 0.100 dB
Peak SAR (extrapolated) = 0.140 W/kg
SAR(1 g) = 0.035 mW/g; SAR(10 g) = 0.015 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.036 mW/g



0 dB = 0.036mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	Jul. 22, 2012
Separation Distance	1.0 cm
Option	Wireless Charging cover

DUT: C811; Type: Bar; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.96 mho/m; ε_r = 51.7; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

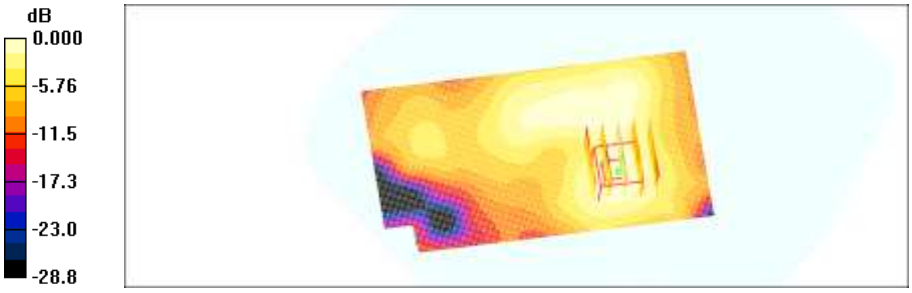
DASY4 Configuration:
- Probe: ET3DV6 - SN1630; ConvF(4.3, 4.3, 4.3); Calibrated: 2011-11-18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: 800/900 Phantom; Type: SAM

802.11b Hotspot Rear Wireless chager cover 1Mbps 11ch/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.037 mW/g

802.11b Hotspot Rear Wireless chager cover 1Mbps 11ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.61 V/m; Power Drift = 0.038 dB
Peak SAR (extrapolated) = 0.168 W/kg
SAR(1 g) = 0.040 mW/g; SAR(10 g) = 0.016 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.037 mW/g



0 dB = 0.037mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	Jul. 22, 2012
Separation Distance	1.0 cm
Option	Extended Battery

DUT: C811; Type: Bar; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.96 mho/m; ε_r = 51.7; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

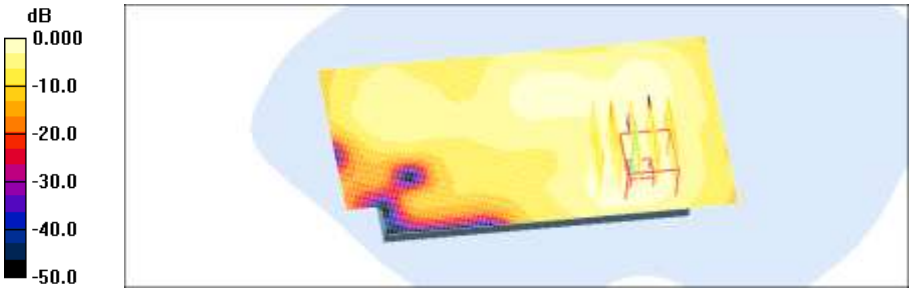
DASY4 Configuration:
- Probe: ET3DV6 - SN1630; ConvF(4.3, 4.3, 4.3); Calibrated: 2011-11-18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: 800/900 Phantom; Type: SAM

802.11b Hotspot Rear Extended Battery 1Mbps 11ch/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.032 mW/g

802.11b Hotspot Rear Extended Battery 1Mbps 11ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.06 V/m; Power Drift = -0.092 dB
Peak SAR (extrapolated) = 0.085 W/kg
SAR(1 g) = 0.029 mW/g; SAR(10 g) = 0.011 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.033 mW/g



0 dB = 0.033mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature: 21.1℃
Ambient Temperature: 21.3℃
Test Date: Aug. 6, 2012

DUT: C811; Type: Bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.901 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

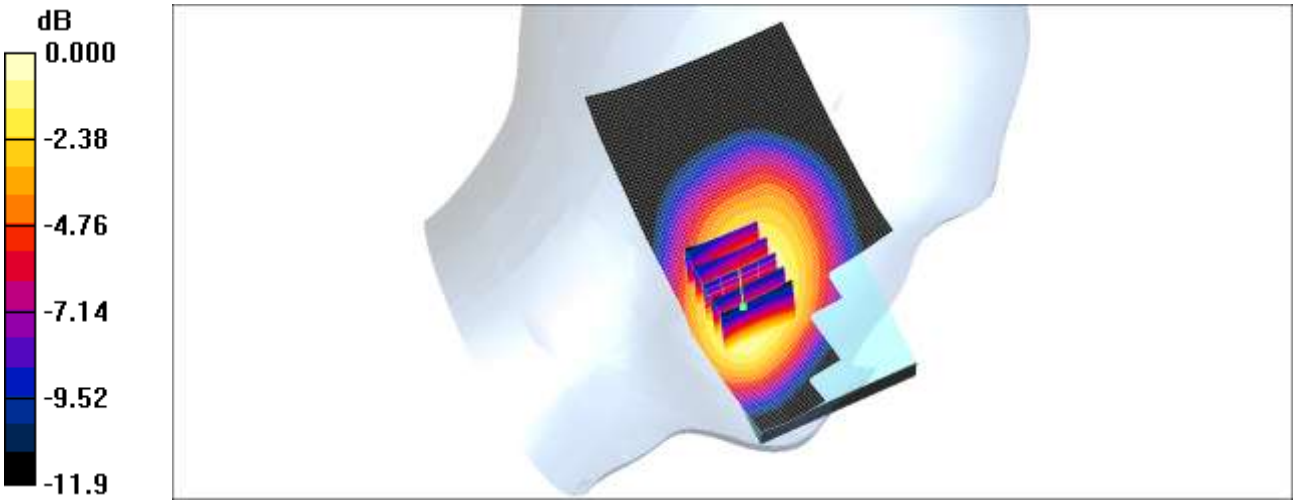
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.64, 6.64, 6.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 835/900 Phamtom ; Type: SAM

Left Touch 384 EVDO Power Reduction/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.285 mW/g

Left Touch 384 EVDO Power Reduction /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.09 V/m; Power Drift = -0.073 dB
Peak SAR (extrapolated) = 0.403 W/kg
SAR(1 g) = 0.277 mW/g; SAR(10 g) = 0.187 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.300 mW/g



0 dB = 0.300mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	Aug. 6, 2012

DUT: C811; Type: Bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.901 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

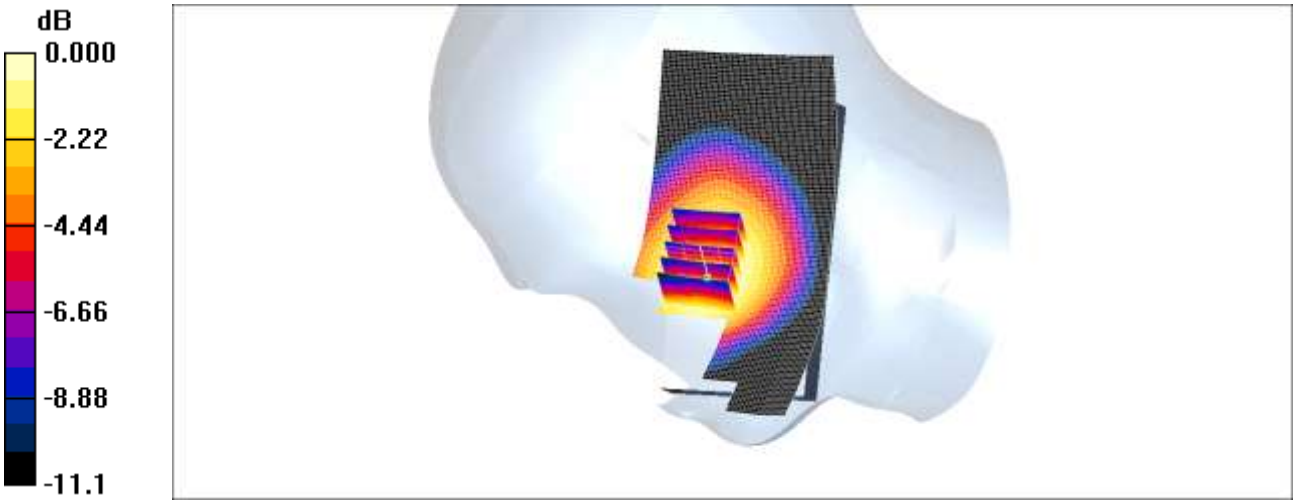
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.64, 6.64, 6.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 835/900 Phamtom ; Type: SAM

Right Touch 384 EVDO Power Reduction /Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.228 mW/g

Right Touch 384 EVDO Power Reduction /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.67 V/m; Power Drift = 0.173 dB
Peak SAR (extrapolated) = 0.276 W/kg
SAR(1 g) = 0.211 mW/g; SAR(10 g) = 0.151 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.222 mW/g



0 dB = 0.222mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	Aug. 6, 2012

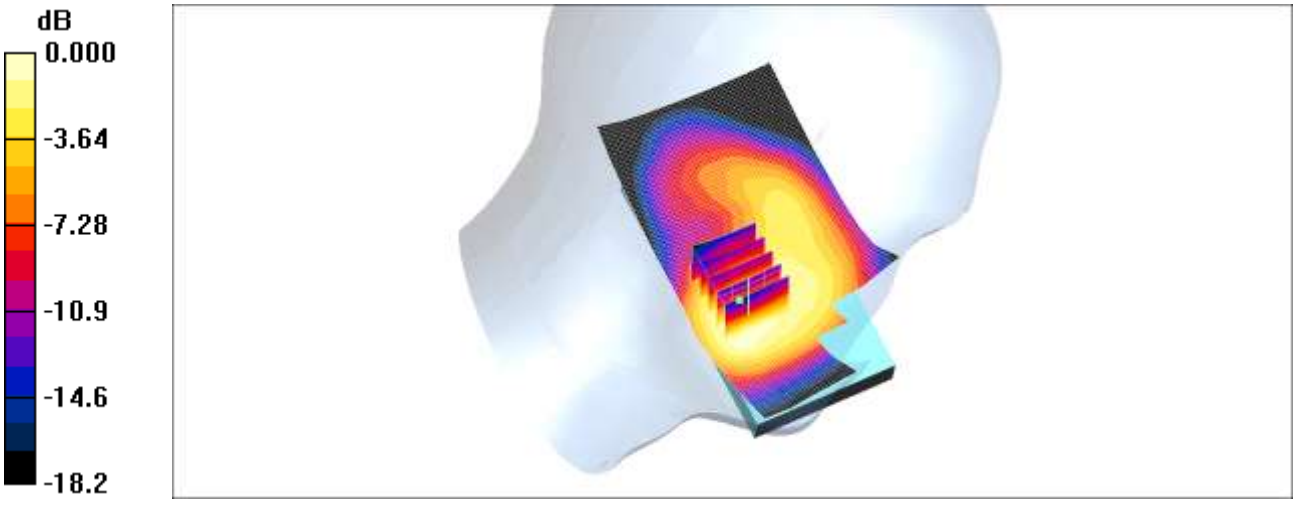
DUT: C811; Type: Bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Left Touch 600 EVDO Power Reduction /Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.295 mW/g

Left Touch 600 EVDO Power Reduction /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.10 V/m; Power Drift = -0.071 dB
Peak SAR (extrapolated) = 0.427 W/kg
SAR(1 g) = 0.263 mW/g; SAR(10 g) = 0.162 mW/g
Maximum value of SAR (measured) = 0.284 mW/g



0 dB = 0.284mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	Aug. 6, 2012

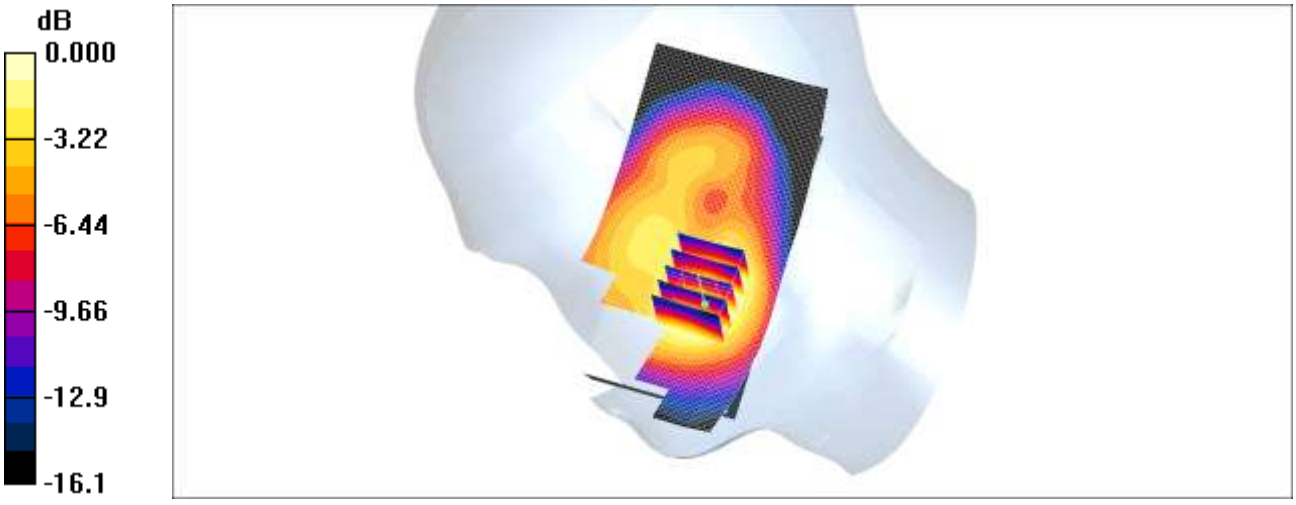
DUT: C811; Type: Bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Right Touch 600 EVDO Power Reduction /Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.221 mW/g

Right Touch 600 EVDO Power Reduction /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.49 V/m; Power Drift = 0.144 dB
Peak SAR (extrapolated) = 0.287 W/kg
SAR(1 g) = 0.203 mW/g; SAR(10 g) = 0.126 mW/g
Maximum value of SAR (measured) = 0.220 mW/g



0 dB = 0.220mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	Aug. 6, 2012
Separation Distance	1.0 cm

DUT: C811; Type: Bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 1.01 mho/m; ε_r = 54.5; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

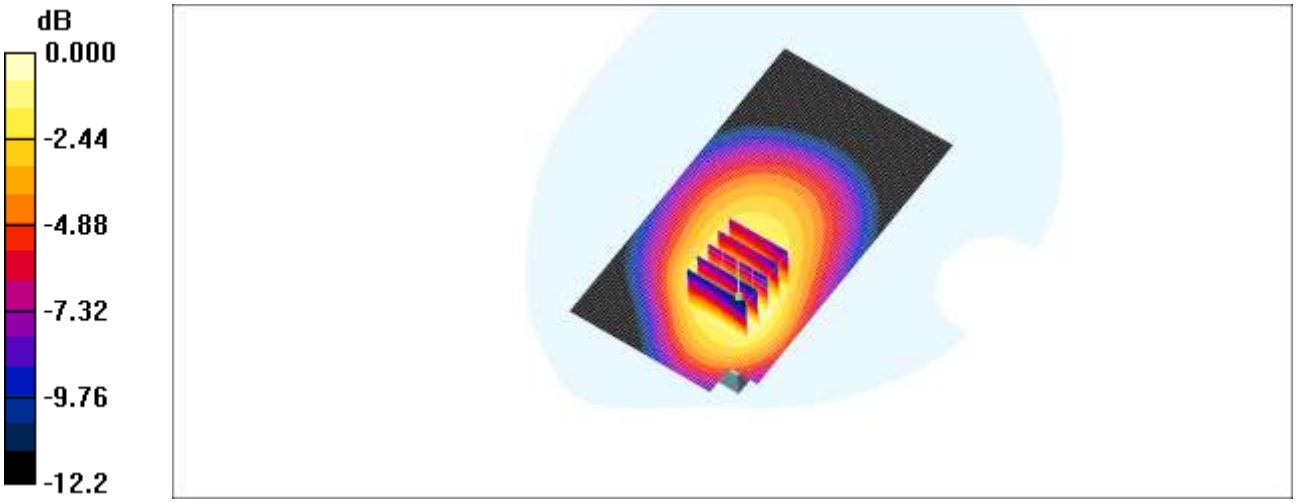
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

CDMA835 Body rear 384 EVDO Power Reduction /Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.349 mW/g

CDMA835 Body rear 384 EVDO Power Reduction /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.57 V/m; Power Drift = 0.084 dB
Peak SAR (extrapolated) = 0.449 W/kg
SAR(1 g) = 0.325 mW/g; SAR(10 g) = 0.229 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.345 mW/g



0 dB = 0.345mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	Aug. 6, 2012
Separation Distance	1.0 cm

DUT: C811; Type: Bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 1.01 mho/m; ε_r = 54.5; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

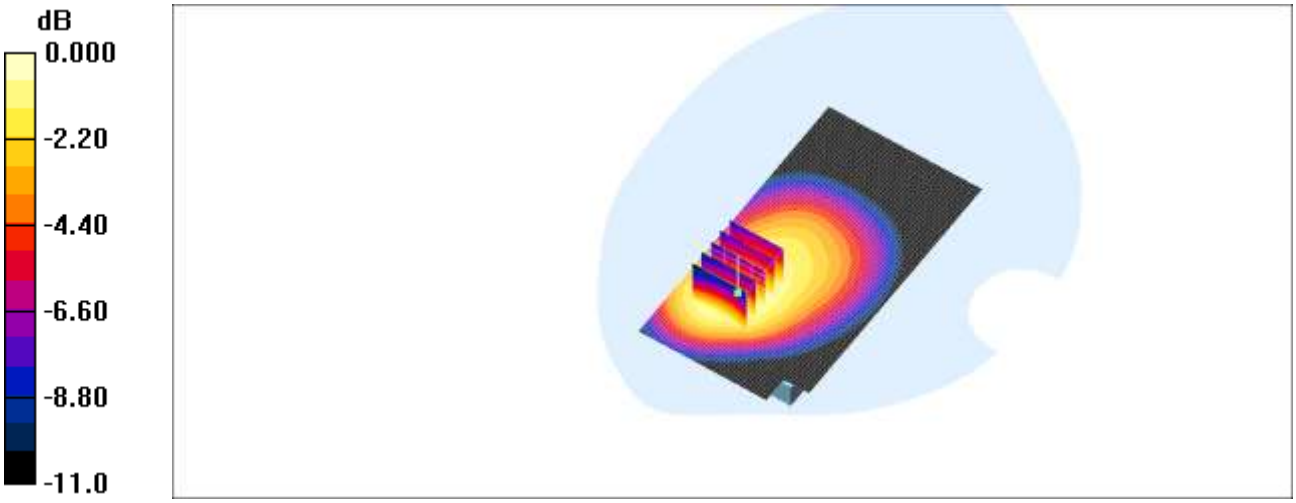
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

CDMA835 Body front 384 EVDO Power Reduction /Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.325 mW/g

CDMA835 Body front 384 EVDO Power Reduction /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.85 V/m; Power Drift = 0.176 dB
Peak SAR (extrapolated) = 0.418 W/kg
SAR(1 g) = 0.316 mW/g; SAR(10 g) = 0.227 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.332 mW/g



0 dB = 0.332mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	Aug. 6, 2012
Separation Distance	1.0 cm

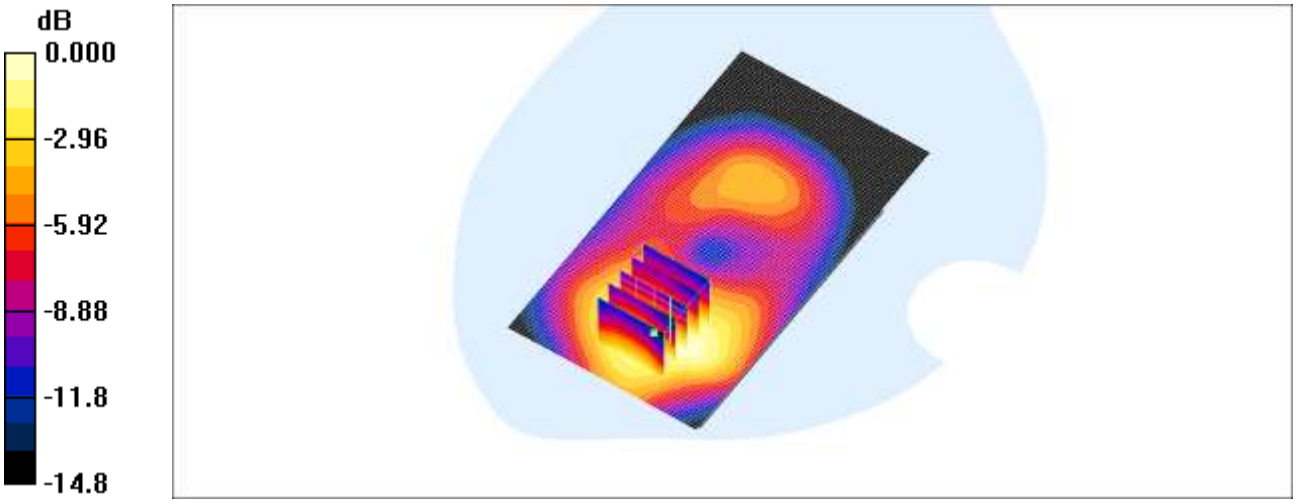
DUT: C811; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.57 mho/m; ε_r = 53.4; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 800/900 Phantom; Type: SAM

Body Rear 600 EVDO Power Reduction /Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.194 mW/g

Body Rear 600 EVDO Power Reduction /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.33 V/m; Power Drift = 0.021 dB
Peak SAR (extrapolated) = 0.264 W/kg
SAR(1 g) = 0.178 mW/g; SAR(10 g) = 0.117 mW/g
Maximum value of SAR (measured) = 0.189 mW/g



0 dB = 0.189mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.1 ℃
Ambient Temperature:	21.3 ℃
Test Date:	Jul. 15, 2012

DUT: C811; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.899 mho/m; ε_r = 42.1; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.64, 6.64, 6.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Left touch 384 EVDO/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.16 mW/g

Left touch 384 EVDO/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.33 V/m; Power Drift = -0.181 dB
Peak SAR (extrapolated) = 1.60 W/kg
SAR(1 g) = 1.08 mW/g; SAR(10 g) = 0.716 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.13 mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature: 21.3℃
Ambient Temperature: 21.5℃
Test Date: Jul. 17, 2012
Separation Distance 1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 848.31 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 848.31 MHz; σ = 1.03 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

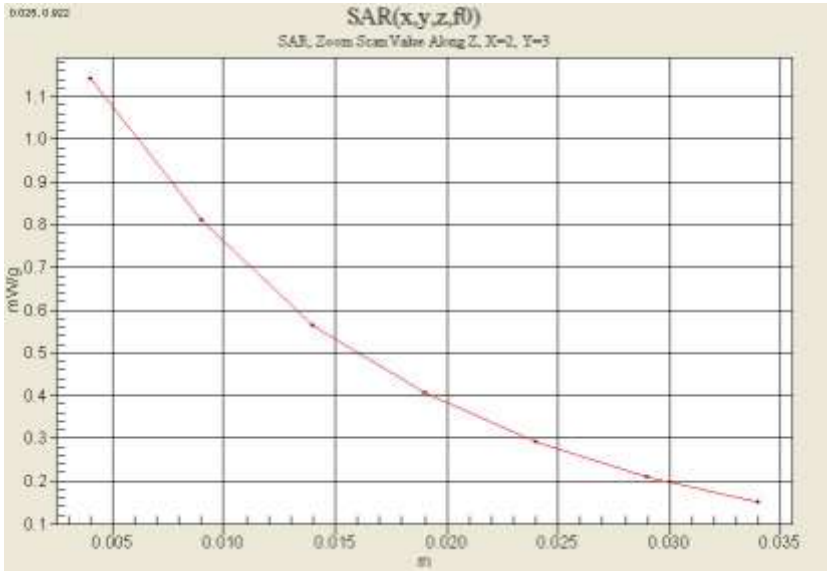
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Rear 777 EVDO/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.13 mW/g

Body Rear 777 EVDO/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.8 V/m; Power Drift = -0.178 dB
Peak SAR (extrapolated) = 1.49 W/kg
SAR(1 g) = 1.08 mW/g; SAR(10 g) = 0.751 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.14 mW/g



Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature: 21.2℃
Ambient Temperature: 21.4℃
Test Date: Jul. 1, 2012

DUT: C811; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 835/900 Phamtom ; Type: SAM

Left touch 600 EVDO/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.20 mW/g

Left touch 600 EVDO/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.8 V/m; Power Drift = -0.148 dB
Peak SAR (extrapolated) = 1.69 W/kg
SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.595 mW/g
Maximum value of SAR (measured) = 1.17 mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature: 21.3℃
Ambient Temperature: 21.5℃
Test Date: Jul. 4, 2012
Separation Distance 1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 835/900 Phamtom ; Type: SAM

Body Front 600 EVDO/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.823 mW/g

Body Front 600 EVDO/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.8 V/m; Power Drift = 0.004 dB
Peak SAR (extrapolated) = 1.07 W/kg
SAR(1 g) = 0.757 mW/g; SAR(10 g) = 0.483 mW/g
Maximum value of SAR (measured) = 0.809 mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature: 21.1℃
Ambient Temperature: 21.3℃
Test Date: Jul. 15, 2012

DUT: C811; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.899 mho/m; ε_r = 42.1; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.64, 6.64, 6.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Left touch 190/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.576 mW/g

Left touch 190/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.71 V/m; Power Drift = -0.007 dB
Peak SAR (extrapolated) = 0.754 W/kg
SAR(1 g) = 0.520 mW/g; SAR(10 g) = 0.348 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.557 mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature: 21.3℃
Ambient Temperature: 21.5℃
Test Date: Jul.17, 2012
Separation Distance 1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:4.15
Medium parameters used (interpolated): f = 836.6 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front 190/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.537 mW/g

Body Front 190/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.0 V/m; Power Drift = 0.156 dB
Peak SAR (extrapolated) = 0.657 W/kg
SAR(1 g) = 0.527 mW/g; SAR(10 g) = 0.389 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.573 mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature: 21.2℃
Ambient Temperature: 21.4℃
Test Date: Jul. 1, 2012

DUT: C811; Type: bar; Serial: #1

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 835/900 Phamtom ; Type: SAM

Left touch 661/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.449 mW/g

Left touch 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.69 V/m; Power Drift = -0.158 dB
Peak SAR (extrapolated) = 0.631 W/kg
SAR(1 g) = 0.392 mW/g; SAR(10 g) = 0.228 mW/g
Maximum value of SAR (measured) = 0.445 mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature: 21.3℃
Ambient Temperature: 21.5℃
Test Date: Jul. 4, 2012
Separation Distance 1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Body Front 661/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.702 mW/g

Body Front 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.5 V/m; Power Drift = 0.044 dB
Peak SAR (extrapolated) = 0.885 W/kg
SAR(1 g) = 0.637 mW/g; SAR(10 g) = 0.403 mW/g
Maximum value of SAR (measured) = 0.690 mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	Jul. 15, 2012

DUT: C811; Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.899 mho/m; ε_r = 42.1; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.64, 6.64, 6.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Left touch 4183/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.981 mW/g

Left touch 4183/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.86 V/m; Power Drift = -0.053 dB
Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.885 mW/g; SAR(10 g) = 0.599 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.932 mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 17, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: WCDMA850; Frequency: 826.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.998 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Front 4132/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.09 mW/g

Body Front 4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.6 V/m; Power Drift = 0.086 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.706 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.08 mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature: 21.2℃
Ambient Temperature: 21.4℃
Test Date: Jul. 1, 2012

DUT: C811; Type: bar; Serial: #1

Communication System: WCDMA1900; Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.42 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 835/900 Phamtom ; Type: SAM

Left touch 9538/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.15 mW/g

Left touch 9538/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.5 V/m; Power Drift = 0.112 dB
Peak SAR (extrapolated) = 1.71 W/kg
SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.563 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.14 mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	Jul. 4, 2012
Separation Distance	1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: WCDMA1900; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Body Front 9400/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.763 mW/g

Body Front 9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.3 V/m; Power Drift = -0.002 dB
Peak SAR (extrapolated) = 0.954 W/kg
SAR(1 g) = 0.677 mW/g; SAR(10 g) = 0.427 mW/g
Maximum value of SAR (measured) = 0.738 mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature: 21.1℃
Ambient Temperature: 21.3℃
Test Date: Jul. 7, 2012

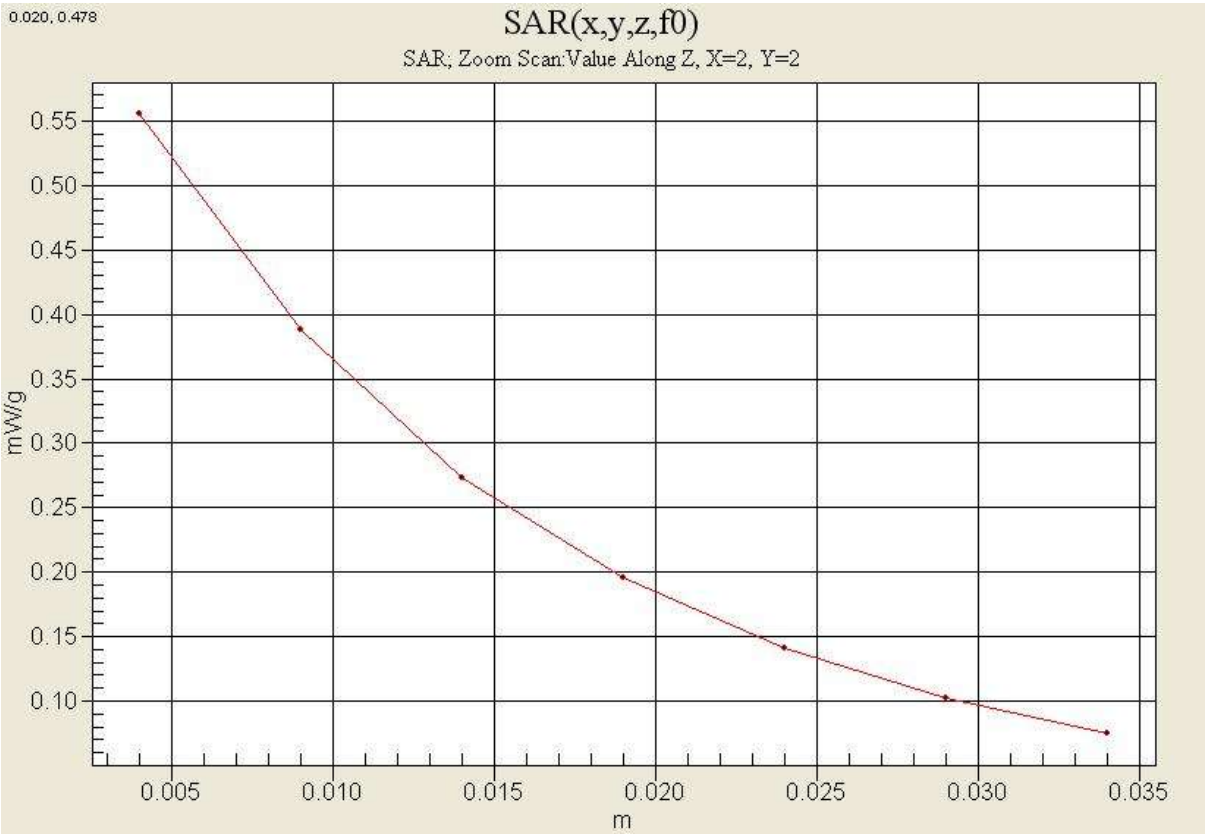
DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used: f = 782.5 MHz; σ = 0.895 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(7.03, 7.03, 7.03); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 835/900 Phamtom ; Type: SAM

Left Touch QPSK 10MHz 25RB 13 offset 23230/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.555 mW/g

Left Touch QPSK 10MHz 25RB 13 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.66 V/m; Power Drift = -0.111 dB
Peak SAR (extrapolated) = 0.757 W/kg
SAR(1 g) = 0.503 mW/g; SAR(10 g) = 0.337 mW/g
Maximum value of SAR (measured) = 0.540 mW/g



Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature: 21.3℃
Ambient Temperature: 21.5℃
Test Date: Jul. 11, 2012
Separation Distance 1.0 cm

DUT: C811; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

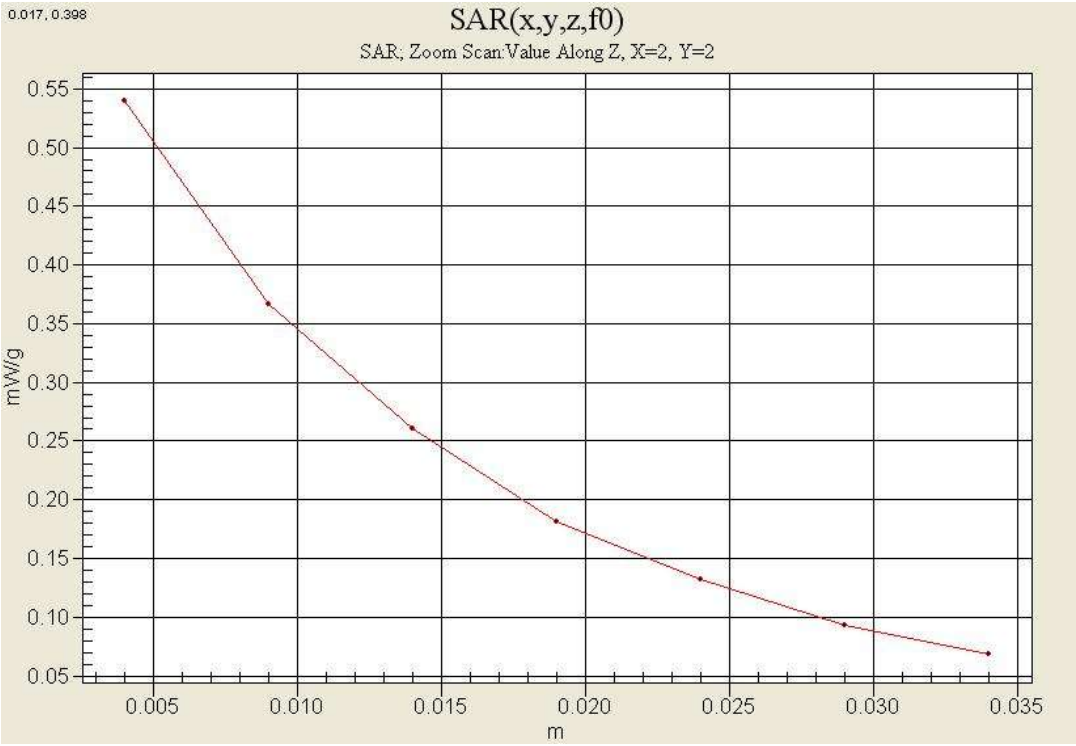
DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: 1800/1900 Phantom; Type: SAM

Body Rear QPSK 10MHz 1RB 0 offset 23230/Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.543 mW/g

Body Rear QPSK 10MHz 1RB 0 offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.5 V/m; Power Drift = -0.036 dB
Peak SAR (extrapolated) = 0.743 W/kg
SAR(1 g) = 0.519 mW/g; SAR(10 g) = 0.359 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.556 mW/g



Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/WCDMA/LTE Phone With Bluetooth/WLAN/NFC
Liquid Temperature: 21.2℃
Ambient Temperature: 21.4℃
Test Date: Jul. 20, 2012

DUT: C811; Type: Bar; Serial: #1

Communication System: 2450MHz FCC; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.78 mho/m; ε_r = 38.7; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

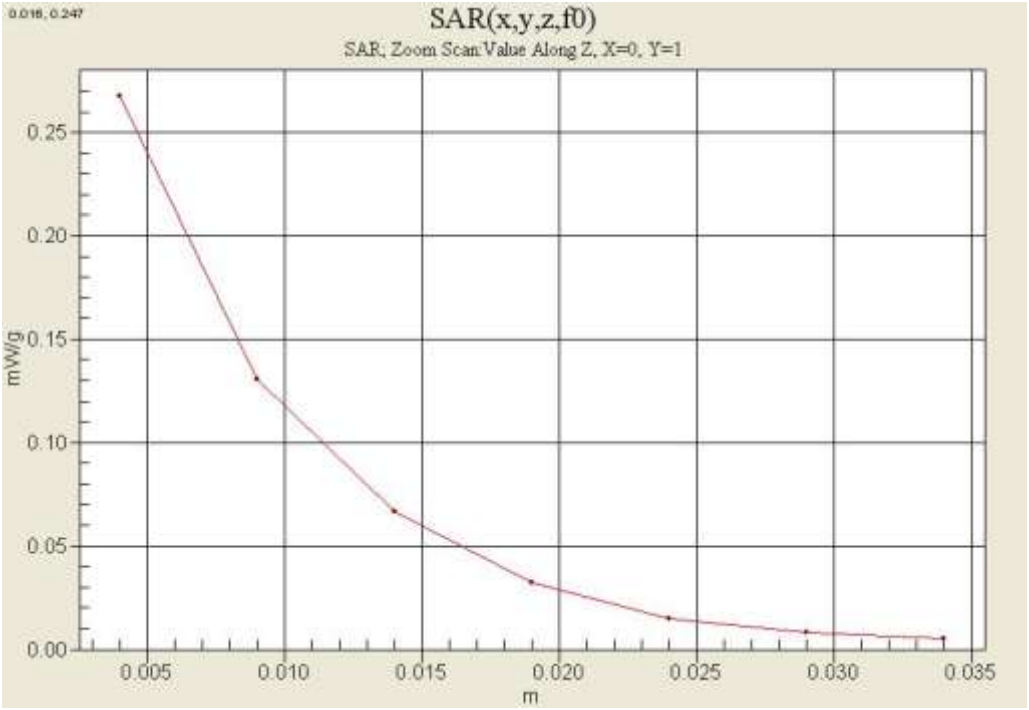
DASY4 Configuration:
- Probe: ET3DV6 - SN1630; ConvF(4.57, 4.57, 4.57); Calibrated: 2011-11-18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: 835/900 Phamtom ; Type: SAM

Left Touch 1Mbps 11ch /Area Scan (61x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.273 mW/g

Left Touch 1Mbps 11ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.80 V/m; Power Drift = 0.160 dB
Peak SAR (extrapolated) = 0.510 W/kg
SAR(1 g) = 0.221 mW/g; SAR(10 g) = 0.122 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.267 mW/g



Attachment 2. – Dipole Validation Plots

■ Validation Data (835 MHz Head)

Test Laboratory: HCT CO., LTD

Input Power 100 mW (20 dBm)

Liquid Temp: 21.2 ℃

Test Date: May 28, 2012

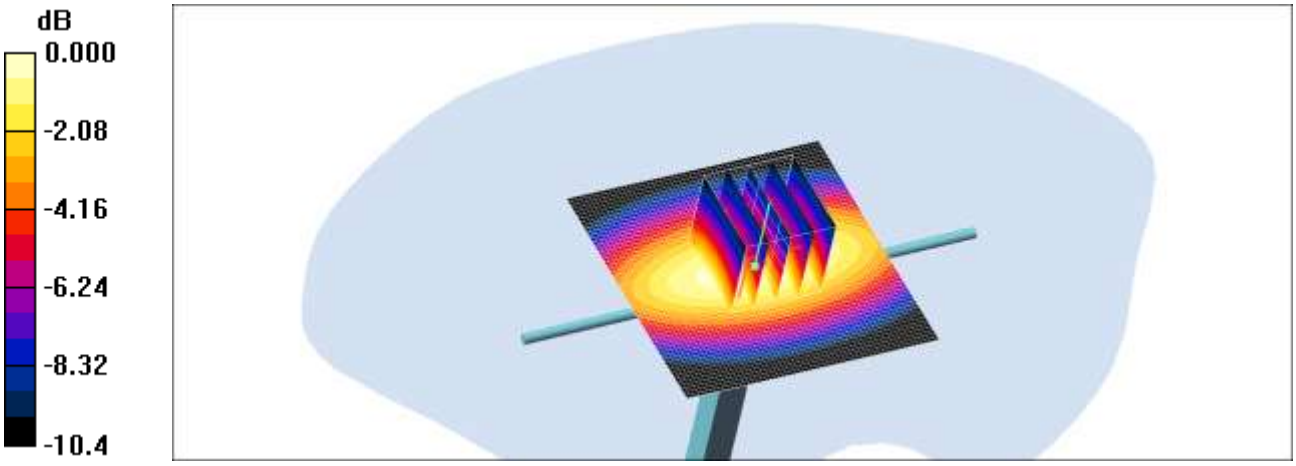
DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 – SN:441

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.898 mho/m; ε_r = 42.1; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.64, 6.64, 6.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Validation 835MHz/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.02 mW/g

Validation 835MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 34.8 V/m; Power Drift = -0.047 dB
Peak SAR (extrapolated) = 1.39 W/kg
SAR(1 g) = 0.942 mW/g; SAR(10 g) = 0.619 mW/g
Maximum value of SAR (measured) = 1.02 mW/g



0 dB = 1.02mW/g

■ Validation Data (835 MHz Body)

Test Laboratory: HCT CO., LTD

Input Power 100 mW (20 dBm)

Liquid Temp: 21.1 ℃

Test Date: May 29, 2012

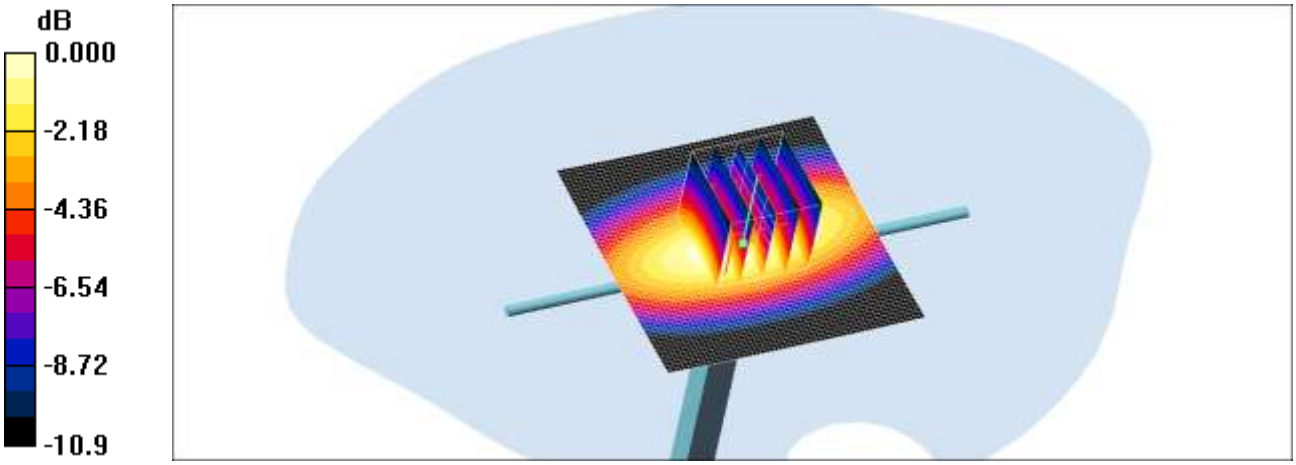
DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 – SN:441

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 1.01 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 1800/1900 MHz; Type: SAM

Validation 835MHz/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.05 mW/g

Validation 835MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 33.6 V/m; Power Drift = -0.023 dB
Peak SAR (extrapolated) = 1.44 W/kg
SAR(1 g) = 0.967 mW/g; SAR(10 g) = 0.623 mW/g
Maximum value of SAR (measured) = 1.05 mW/g



0 dB = 1.05mW/g

■ Validation Data (1900 MHz Head)

Test Laboratory: HCT CO., LTD

Input Power 100 mW (20 dBm)

Liquid Temp: 21.3 ℃

Test Date: May 30, 2012

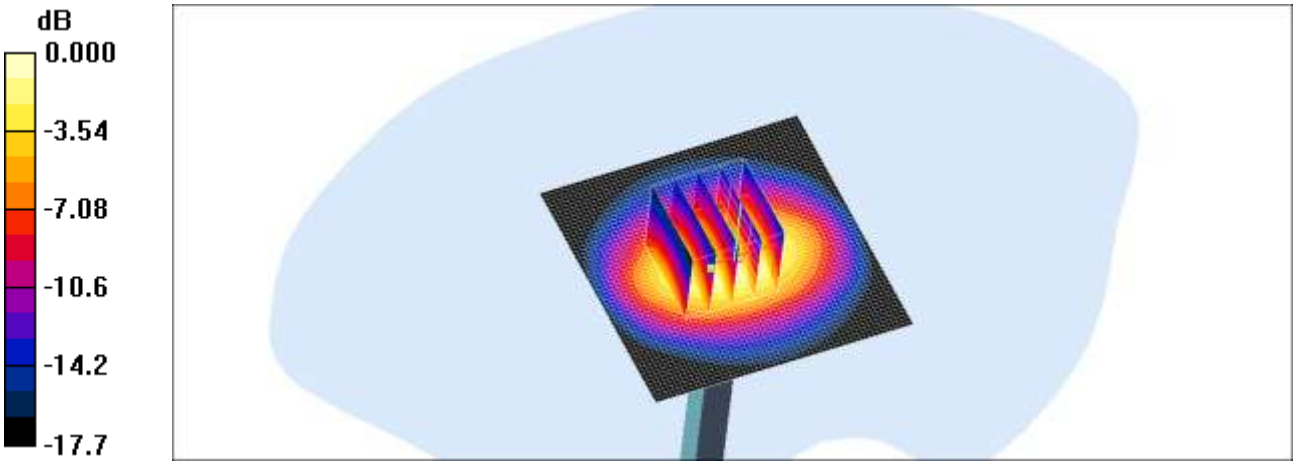
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 – SN:5d032

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.41 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Dipole 1900MHz Validation/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 4.40 mW/g

Dipole 1900MHz Validation/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 58.3 V/m; Power Drift = -0.004 dB
Peak SAR (extrapolated) = 6.73 W/kg
SAR(1 g) = 3.96 mW/g; SAR(10 g) = 2.21 mW/g
Maximum value of SAR (measured) = 4.37 mW/g



0 dB = 4.37mW/g

■ Validation Data (1900 MHz Body)

Test Laboratory: HCT CO., LTD

Input Power 100 mW (20 dBm)

Liquid Temp: 21.2 ℃

Test Date: May 31, 2012

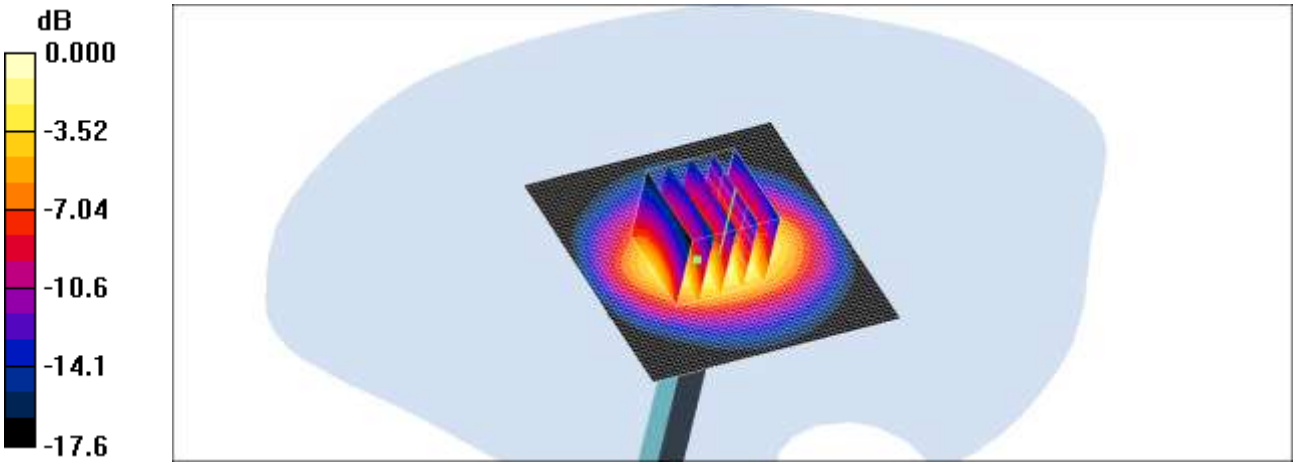
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d032

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.48 mho/m; ε_r = 53.4; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 835/900 MHz; Type: SAM

Dipole 1900MHz Validation/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 4.69 mW/g

Dipole 1900MHz Validation/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 60.0 V/m; Power Drift = -0.010 dB
Peak SAR (extrapolated) = 6.53 W/kg
SAR(1 g) = 4.17 mW/g; SAR(10 g) = 2.37 mW/g
Maximum value of SAR (measured) = 4.66 mW/g



0 dB = 4.66mW/g

■ Validation Data (835 MHz Head)

Test Laboratory: HCT CO., LTD

Input Power 100 mW (20 dBm)

Liquid Temp: 21.3 ℃

Test Date: Aug. 6, 2012

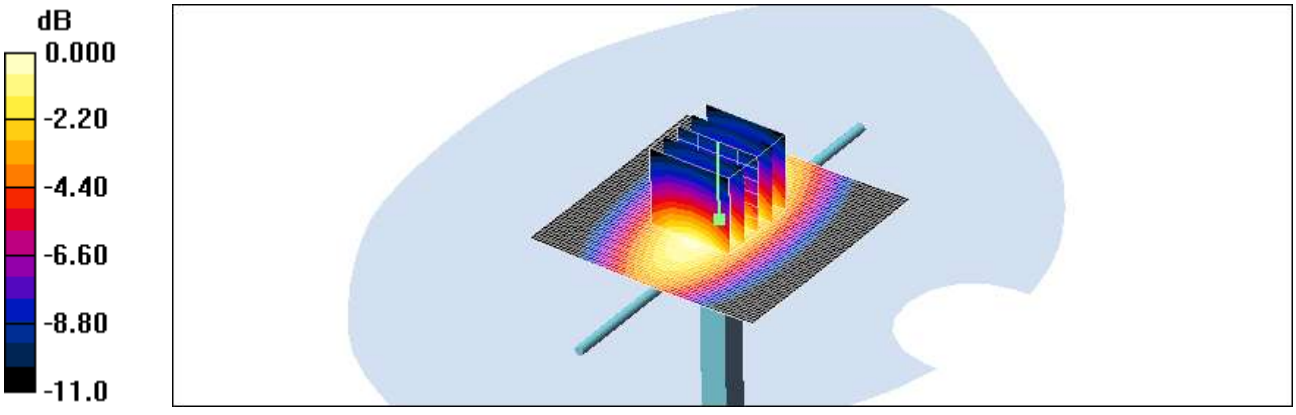
DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 – SN:441

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.9 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.64, 6.64, 6.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 1800/1900 MHz; Type: SAM

Validation 835MHz/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.02 mW/g

Validation 835MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 34.7 V/m; Power Drift = -0.002 dB
Peak SAR (extrapolated) = 1.45 W/kg
SAR(1 g) = 0.942 mW/g; SAR(10 g) = 0.600 mW/g
Maximum value of SAR (measured) = 1.03 mW/g



0 dB = 1.03mW/g

■ Validation Data (835 MHz Body)

Test Laboratory: HCT CO., LTD

Input Power 100 mW (20 dBm)

Liquid Temp: 21.3 ℃

Test Date: Aug. 6, 2012

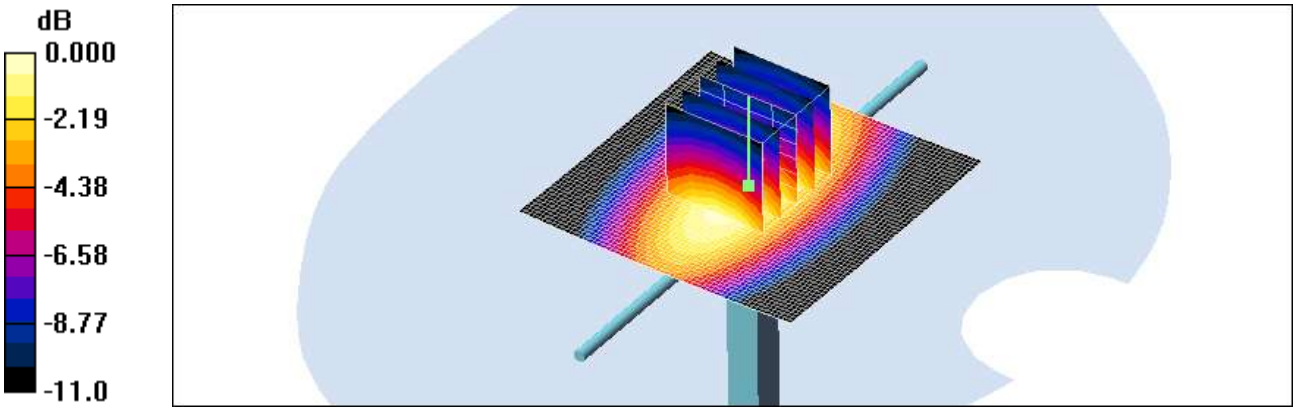
DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 – SN:441

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 1.01 mho/m; ε_r = 54.5; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.52, 6.52, 6.52); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 1800/1900 MHz; Type: SAM

Validation 835MHz/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.04 mW/g

Validation 835MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 33.4 V/m; Power Drift = -0.016 dB
Peak SAR (extrapolated) = 1.44 W/kg
SAR(1 g) = 0.962 mW/g; SAR(10 g) = 0.617 mW/g
Maximum value of SAR (measured) = 1.05 mW/g



0 dB = 1.05mW/g

■ Validation Data (1900 MHz Head)

Test Laboratory: HCT CO., LTD

Input Power 100 mW (20 dBm)

Liquid Temp: 21.3 ℃

Test Date: Aug. 6, 2012

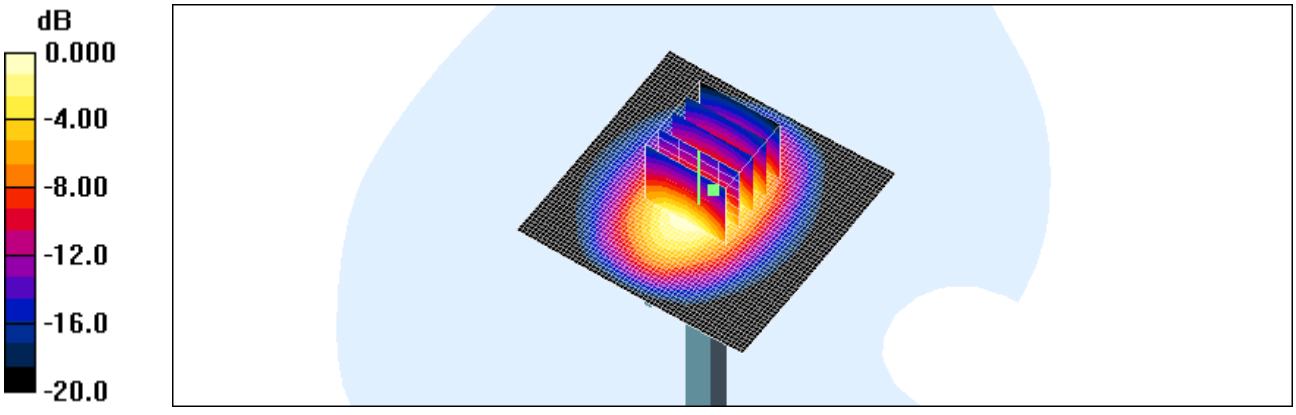
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 – SN: **SN:5d032**

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.41 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(5.26, 5.26, 5.26); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 1800/1900 MHz; Type: SAM

Dipole 1900MHz Validation/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 4.77 mW/g

Dipole 1900MHz Validation/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 59.6 V/m; Power Drift = -0.054 dB
Peak SAR (extrapolated) = 7.31 W/kg
SAR(1 g) = 4.04 mW/g; SAR(10 g) = 2.09 mW/g
Maximum value of SAR (measured) = 4.50 mW/g



0 dB = 4.50mW/g

■ Validation Data (1900 MHz Body)

Test Laboratory: HCT CO., LTD

Input Power 100 mW (20 dBm)

Liquid Temp: 21.3 ℃

Test Date: Aug. 6, 2012

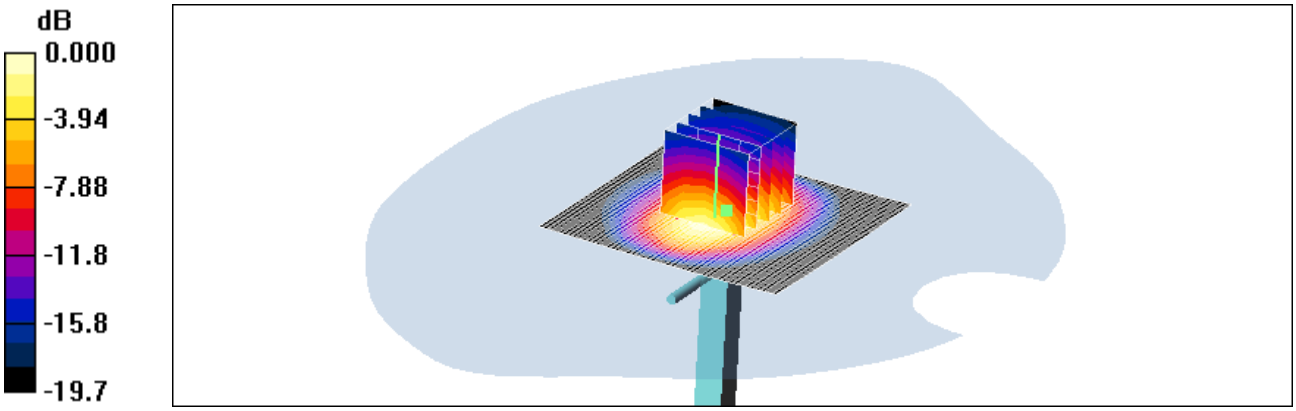
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 – SN: **5d032**

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.59 mho/m; ε_r = 53.4; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(4.64, 4.64, 4.64); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 1800/1900 MHz; Type: SAM

Dipole 1900MHz Validation/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 4.87 mW/g

Dipole 1900MHz Validation/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 57.2 V/m; Power Drift = 0.039 dB
Peak SAR (extrapolated) = 6.92 W/kg
SAR(1 g) = 4.13 mW/g; SAR(10 g) = 2.17 mW/g
Maximum value of SAR (measured) = 4.64 mW/g



0 dB = 4.64mW/g

■ Validation Data (LTE 750 MHz Head)

Test Laboratory: HCT CO., LTD

Input Power 100 mW (20 dBm)

Liquid Temp: 21.1 ℃

Test Date: Jun. 02, 2012

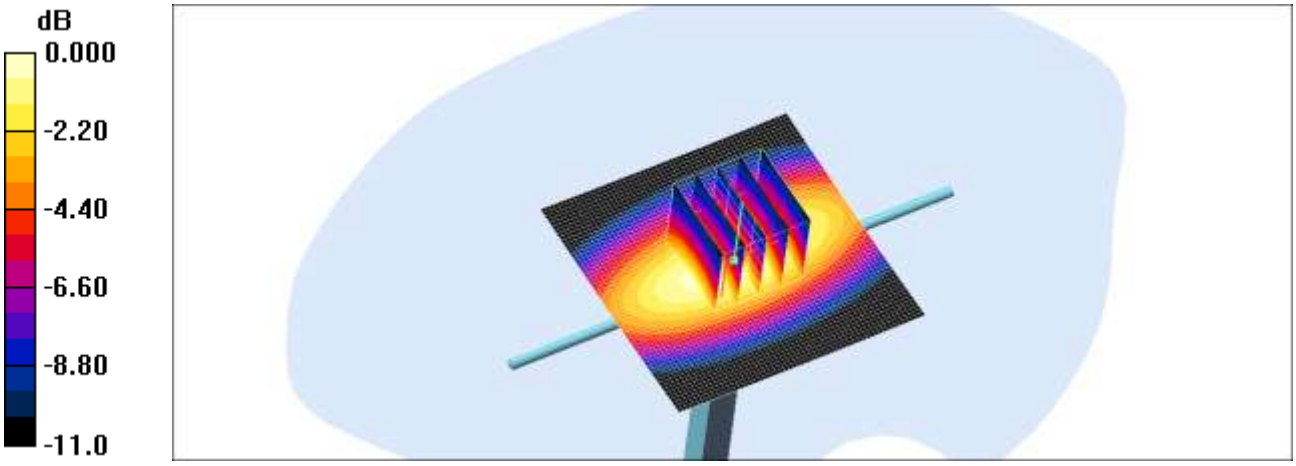
DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 – SN:1014

Communication System: CW; Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.867 mho/m; ε_r = 42.2; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(7.03, 7.03, 7.03); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 1800/1900 MHz; Type: SAM

Validation 750MHz/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.925 mW/g

Validation 750MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 33.8 V/m; Power Drift = -0.002 dB
Peak SAR (extrapolated) = 1.30 W/kg
SAR(1 g) = 0.854 mW/g; SAR(10 g) = 0.545 mW/g
Maximum value of SAR (measured) = 0.931 mW/g



0 dB = 0.931mW/g

■ Validation Data (LTE 750 MHz Body)

Test Laboratory: HCT CO., LTD

Input Power 100 mW (20 dBm)

Liquid Temp: 21.3 ℃

Test Date: Jun. 03, 2012

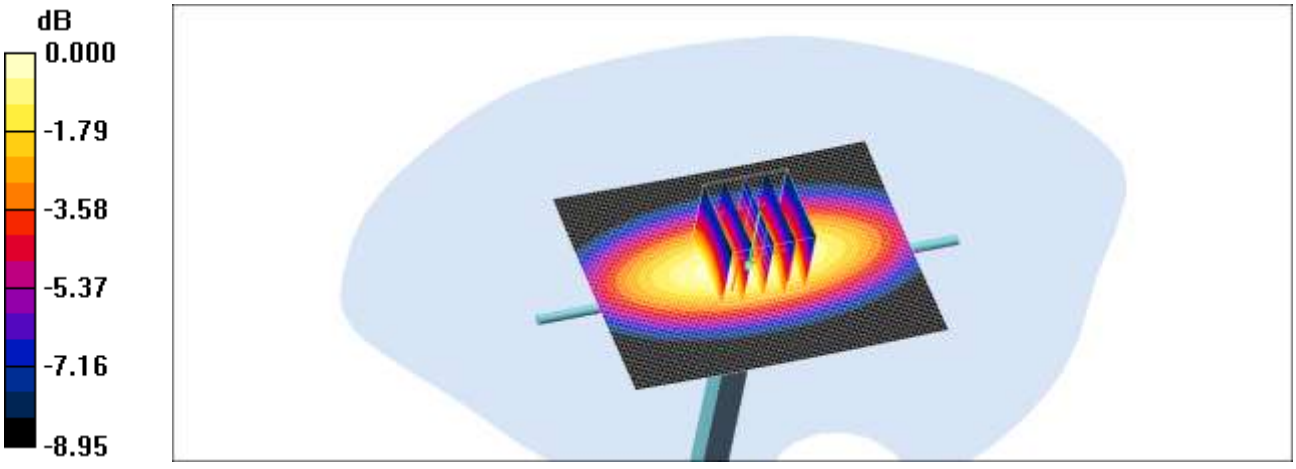
DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 – SN:1014

Communication System: CW; Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.989 mho/m; ε_r = 55; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1605; ConvF(6.61, 6.61, 6.61); Calibrated: 2012-04-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2011-09-22
- Phantom: SAM 1800/1900 MHz; Type: SAM

Validatoin 750 MHz/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 9.69 mW/g

Validatoin 750 MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 101.5 V/m; Power Drift = 0.013 dB
Peak SAR (extrapolated) = 11.8 W/kg
SAR(1 g) = 8.96 mW/g; SAR(10 g) = 6.23 mW/g
Maximum value of SAR (measured) = 9.66 mW/g



0 dB = 9.66mW/g

■ Validation Data (2450 MHz Head)

Test Laboratory: HCT CO., LTD

Input Power 100 mW (20 dBm)

Liquid Temp: 21.1 ℃

Test Date: Jun. 01, 2012

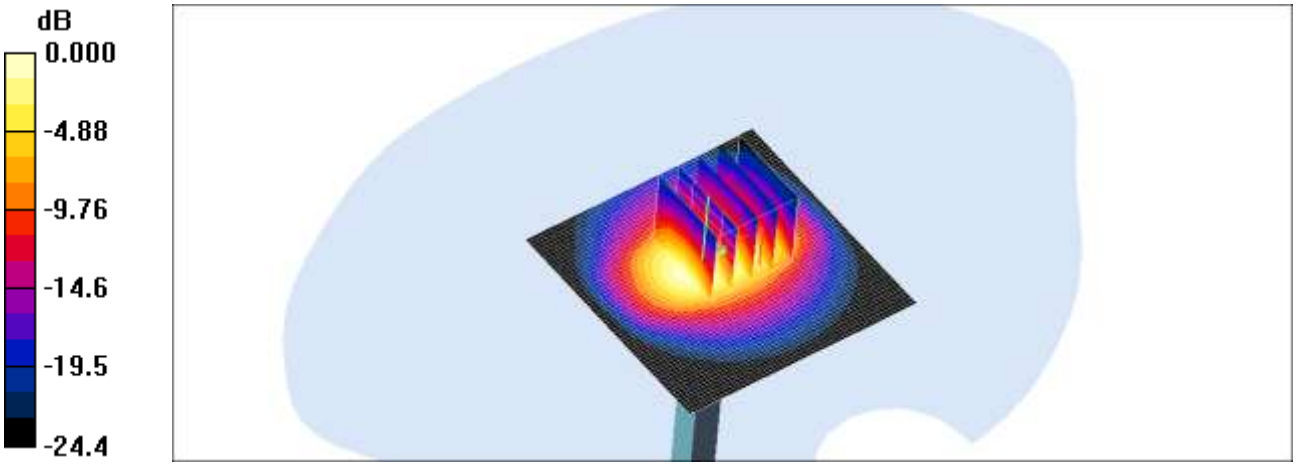
DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 – SN:743

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.76 mho/m; ε_r = 38.7; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1630; ConvF(4.57, 4.57, 4.57); Calibrated: 2011-11-18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: 1800/1900 Phantom; Type: SAM

Validation 2450MHz/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 6.95 mW/g

Validation 2450MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 60.1 V/m; Power Drift = -0.022 dB
Peak SAR (extrapolated) = 12.7 W/kg
SAR(1 g) = 5.49 mW/g; SAR(10 g) = 2.56 mW/g
Maximum value of SAR (measured) = 5.93 mW/g



0 dB = 5.93mW/g

■ Validation Data (2450 MHz Body)

Test Laboratory: HCT CO., LTD

Input Power 100 mW (20 dBm)

Liquid Temp: 21.1 ℃

Test Date: Jun. 01, 2012

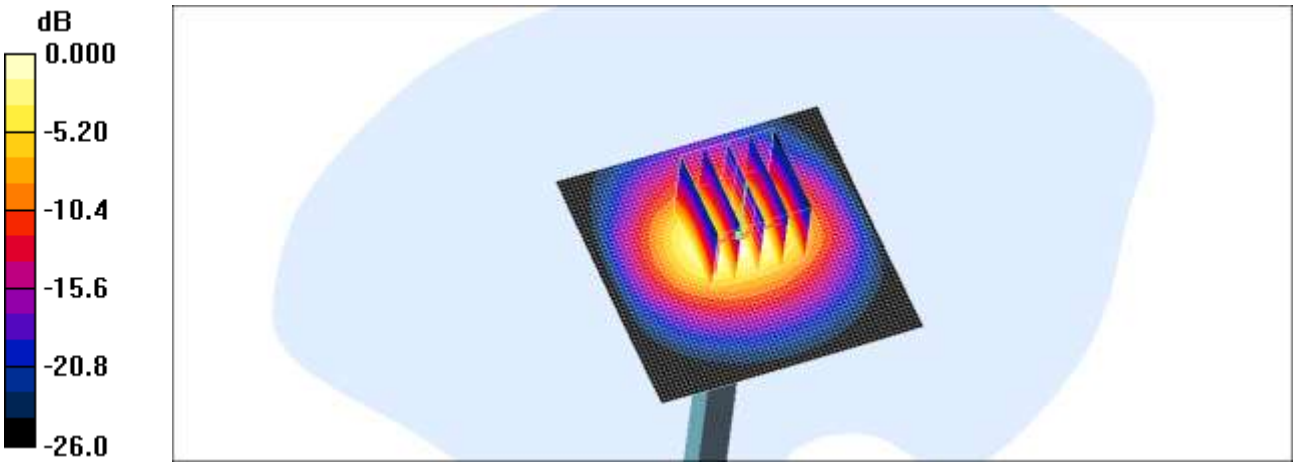
DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 – SN:743

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.94 mho/m; ε_r = 51.8; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1630; ConvF(4.3, 4.3, 4.3); Calibrated: 2011-11-18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Validation 2450MHz/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 6.04 mW/g

Validation 2450MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 54.2 V/m; Power Drift = -0.034 dB
Peak SAR (extrapolated) = 12.2 W/kg
SAR(1 g) = 5.06 mW/g; SAR(10 g) = 2.25 mW/g
Maximum value of SAR (measured) = 5.56 mW/g



0 dB = 5.56mW/g

■ Validation Data (2450 MHz Body)

Test Laboratory: HCT CO., LTD

Input Power 100 mW (20 dBm)

Liquid Temp: 21.1 ℃

Test Date: Jun. 01, 2012

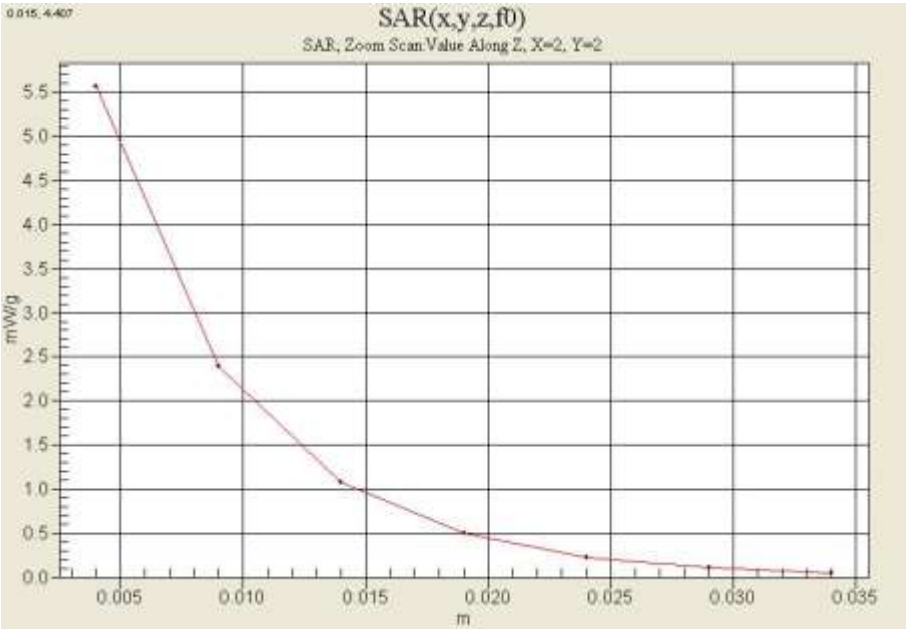
DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 – SN:743

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.94 mho/m; ε_r = 51.8; ρ = 1000 kg/m^3
Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: ET3DV6 - SN1630; ConvF(4.3, 4.3, 4.3); Calibrated: 2011-11-18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Validation 2450MHz/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 6.04 mW/g

Validation 2450MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 54.2 V/m; Power Drift = -0.034 dB
Peak SAR (extrapolated) = 12.2 W/kg
SAR(1 g) = 5.06 mW/g; SAR(10 g) = 2.25 mW/g
Maximum value of SAR (measured) = 5.56 mW/g



■ Dielectric Parameter (835 MHz Head)

Title	C811
SubTitle	CDMA835(Head)
Test Date	Jul. 15 2012

Frequency	e'	e''
800000000	42.5119	19.4542
805000000	42.4512	19.4231
810000000	42.3473	19.3883
815000000	42.3368	19.4141
820000000	42.2761	19.4109
825000000	42.2082	19.3779
830000000	42.1937	19.3622
835000000	42.0934	19.3392
840000000	42.0894	19.2999
845000000	42.0216	19.2739
850000000	41.9591	19.2624
855000000	41.9583	19.3004
860000000	41.8471	19.2570
865000000	41.7728	19.3008
870000000	41.7308	19.2586
875000000	41.6464	19.2597
880000000	41.5863	19.2539
885000000	41.4798	19.2069
890000000	41.4397	19.2109
895000000	41.3341	19.2097
900000000	41.3391	19.1757

■ Dielectric Parameter (835 MHz Body)

Title	C811
SubTitle	CDMA 850(Body)
Test Date	Jul. 17 2012

Frequency	e'	e''
800000000	54.6871	21.6752
805000000	54.6786	21.7058
810000000	54.6544	21.6737
815000000	54.6359	21.7016
820000000	54.6538	21.6879
825000000	54.6431	21.7011
830000000	54.6251	21.7222
835000000	54.5678	21.7242
840000000	54.5426	21.7642
845000000	54.4677	21.7562
850000000	54.4073	21.7541
855000000	54.3063	21.7566
860000000	54.1942	21.7256
865000000	54.1486	21.6377
870000000	54.0311	21.5997
875000000	53.9467	21.5605
880000000	53.8843	21.4922
885000000	53.9002	21.4049
890000000	53.8576	21.3303
895000000	53.7903	21.2450
900000000	53.7871	21.1877

■ Dielectric Parameter (1900 MHz Head)

Title	C811
SubTitle	PCS1900(Head)
Test Date	Jul. 1, 2012

Frequency	e'	e''
1800000000	40.1809	13.0334
1810000000	40.1423	13.0745
1820000000	40.1169	13.1095
1830000000	40.0723	13.1403
1840000000	40.0641	13.1600
1850000000	39.9958	13.1861
1860000000	39.9754	13.2013
1870000000	39.9236	13.2414
1880000000	39.8846	13.2811
1890000000	39.8427	13.3101
1900000000	39.8019	13.3386
1910000000	39.7623	13.3639
1920000000	39.7139	13.3843
1930000000	39.6823	13.4001
1940000000	39.6389	13.4027
1950000000	39.6050	13.4361
1960000000	39.5637	13.4493
1970000000	39.5179	13.4959
1980000000	39.4690	13.5322
1990000000	39.4393	13.5525
2000000000	39.3938	13.5670

■ Dielectric Parameter (1900 MHz Body)

Title	C811
SubTitle	PCS1900(Body)
Test Date	Jul. 4, 2012

Frequency	e'	e''
1850000000	53.6492	13.8429
1855000000	53.6321	13.8468
1860000000	53.6520	13.8776
1865000000	53.6332	13.9013
1870000000	53.6091	13.9046
1875000000	53.5641	13.9316
1880000000	53.5604	13.9583
1885000000	53.5079	13.9688
1890000000	53.4736	13.9852
1895000000	53.4358	13.9827
1900000000	53.4251	14.0136
1905000000	53.3770	14.0279
1910000000	53.3571	14.0573
1915000000	53.2939	14.0878
1920000000	53.2916	14.1115
1925000000	53.2935	14.1375
1930000000	53.2450	14.1468
1935000000	53.2725	14.1878
1940000000	53.2671	14.1971
1945000000	53.2792	14.2380
1950000000	53.2779	14.2330

■ Dielectric Parameter (835 MHz Head)

Title	C811
SubTitle	CDMA835(Head)
Test Date	Aug. 6, 2012

Frequency	e'	e''
800000000.0000	43.1586	19.4829
805000000.0000	43.1309	19.4841
810000000.0000	43.0911	19.4779
815000000.0000	43.0349	19.5249
820000000.0000	42.9821	19.4848
825000000.0000	42.9160	19.4331
830000000.0000	42.8714	19.4343
835000000.0000	42.8399	19.3683
840000000.0000	42.7996	19.3791
845000000.0000	42.7325	19.3663
850000000.0000	42.6945	19.3609
855000000.0000	42.6178	19.3618
860000000.0000	42.5973	19.3566
865000000.0000	42.5075	19.3412
870000000.0000	42.4031	19.3409
875000000.0000	42.3397	19.3541
880000000.0000	42.2926	19.3169
885000000.0000	42.2547	19.3076
890000000.0000	42.1526	19.2828
895000000.0000	42.0341	19.2985
900000000.0000	42.0367	19.2826

■ Dielectric Parameter (835 MHz Body)

Title	C811
SubTitle	CDMA 850(Body)
Test Date	Aug. 6, 2012

Frequency	e'	e''
800000000.0000	54.5957	21.7076
805000000.0000	54.5935	21.6906
810000000.0000	54.5812	21.6432
815000000.0000	54.5765	21.6779
820000000.0000	54.5447	21.6657
825000000.0000	54.5398	21.6940
830000000.0000	54.5151	21.6957
835000000.0000	54.5010	21.6934
840000000.0000	54.4397	21.7250
845000000.0000	54.3808	21.7446
850000000.0000	54.3095	21.7414
855000000.0000	54.2154	21.7035
860000000.0000	54.1300	21.6847
865000000.0000	54.0682	21.6250
870000000.0000	53.9662	21.5706
875000000.0000	53.8871	21.5726
880000000.0000	53.8421	21.4657
885000000.0000	53.8249	21.4022
890000000.0000	53.7623	21.3568
895000000.0000	53.7355	21.2663
900000000.0000	53.7189	21.2407

■ Dielectric Parameter (1900 MHz Head)

Title	C811
SubTitle	PCS1900(Head)
Test Date	Aug. 6, 2012

Frequency	e'	e''
1800000000.0000	40.1877	13.0102
1810000000.0000	40.1580	13.0487
1820000000.0000	40.1238	13.0805
1830000000.0000	40.0874	13.1262
1840000000.0000	40.0590	13.1366
1850000000.0000	40.0170	13.1548
1860000000.0000	39.9789	13.1754
1870000000.0000	39.9387	13.2157
1880000000.0000	39.8881	13.2552
1890000000.0000	39.8490	13.2815
1900000000.0000	39.8094	13.3173
1910000000.0000	39.7726	13.3397
1920000000.0000	39.7312	13.3645
1930000000.0000	39.6939	13.3718
1940000000.0000	39.6589	13.3773
1950000000.0000	39.6136	13.4164
1960000000.0000	39.5694	13.4268
1970000000.0000	39.5291	13.4734
1980000000.0000	39.4871	13.5054
1990000000.0000	39.4420	13.5273
2000000000.0000	39.4075	13.5361

■ Dielectric Parameter (1900 MHz Body)

Title	C811
SubTitle	PCS1900(Body)
Test Date	Aug. 6, 2012

Frequency	e'	e''
1850000000.0000	53.4998	14.9166
1855000000.0000	53.5026	14.9583
1860000000.0000	53.5074	14.9688
1865000000.0000	53.4946	14.9878
1870000000.0000	53.4690	14.9557
1875000000.0000	53.4442	14.9969
1880000000.0000	53.4167	15.0184
1885000000.0000	53.4340	14.9917
1890000000.0000	53.4087	14.9784
1895000000.0000	53.3490	15.0153
1900000000.0000	53.3544	15.0105
1905000000.0000	53.2752	15.0292
1910000000.0000	53.2408	15.0360
1915000000.0000	53.2051	15.0331
1920000000.0000	53.1569	15.0753
1925000000.0000	53.1211	15.0949
1930000000.0000	53.0747	15.1064
1935000000.0000	53.0616	15.1530
1940000000.0000	53.0422	15.1688
1945000000.0000	53.0265	15.1997
1950000000.0000	53.0469	15.2294

■ Dielectric Parameter (750 MHz Head)

Title	C811
SubTitle	LTE (Head)
Test Date	Jul. 11, 2012

Frequency	e'	e''
750000000	42.1588	20.7719
752500000	42.0919	20.7646
755000000	42.0389	20.7194
757500000	42.0295	20.7093
760000000	41.9905	20.6725
762500000	41.9764	20.6865
765000000	41.9392	20.6326
767500000	41.8562	20.6418
770000000	41.8079	20.6082
772500000	41.7774	20.5985
775000000	41.7842	20.6017
777500000	41.7120	20.5805
780000000	41.7200	20.5442
782500000	41.6501	20.5508
785000000	41.6327	20.5437
787500000	41.6128	20.5262
790000000	41.5855	20.5218
792500000	41.5605	20.4838
795000000	41.5028	20.4877
797500000	41.4893	20.4909
800000000	41.4603	20.4763

■ Dielectric Parameter (750 MHz Body)

Title	C811
SubTitle	LTE (Body)
Test Date	Jul. 11, 2012

Frequency	e'	e''
700000000	55.6668	24.1062
705000000	55.5625	24.0716
710000000	55.5288	24.0343
715000000	55.3975	24.0033
720000000	55.3781	23.9436
725000000	55.2544	23.9057
730000000	55.2262	23.8128
735000000	55.1484	23.8110
740000000	55.1181	23.7999
745000000	55.0306	23.7225
750000000	54.9845	23.6930
755000000	54.9304	23.5821
760000000	54.8309	23.6376
765000000	54.8060	23.5186
770000000	54.6912	23.4313
775000000	54.6033	23.4011
780000000	54.5875	23.4055
785000000	54.5473	23.3363
790000000	54.4989	23.3753
795000000	54.4121	23.3000
800000000	54.3334	23.2115

■ Dielectric Parameter (2450 MHz Head)

Title	C811
SubTitle	2450MHz (Head)
Test Date	Jul. 22, 2012

Frequency	e'	e''
2400000000	38.9320	12.6376
2405000000	38.9256	12.6620
2410000000	38.8911	12.6970
2415000000	38.8589	12.7249
2420000000	38.8369	12.7414
2425000000	38.8083	12.7500
2430000000	38.7818	12.7660
2435000000	38.7630	12.7702
2440000000	38.7445	12.8023
2445000000	38.7309	12.8532
2450000000	38.7144	12.9376
2455000000	38.6923	12.9608
2460000000	38.6710	12.9828
2465000000	38.6535	13.0161
2470000000	38.6439	13.0379
2475000000	38.6238	13.0521
2480000000	38.6115	13.0880
2485000000	38.5905	13.1075
2490000000	38.5796	13.1122
2495000000	38.5694	13.1312
2500000000	38.5447	13.1555

■ Dielectric Parameter (2450 MHz Body)

Title	C811
SubTitle	2450MHz (Body)
Test Date	Jul. 22, 2012

Frequency	e'	e''
2400000000	52.0131	13.9783
2405000000	52.0225	13.9771
2410000000	51.9702	14.0160
2415000000	51.9480	14.0248
2420000000	51.9014	14.0794
2425000000	51.8694	14.0858
2430000000	51.8351	14.1256
2435000000	51.8304	14.1767
2440000000	51.8149	14.1893
2445000000	51.7649	14.2423
2450000000	51.7630	14.2678
2455000000	51.7587	14.3383
2460000000	51.7241	14.3346
2465000000	51.7272	14.3394
2470000000	51.7244	14.4010
2475000000	51.7014	14.4056
2480000000	51.7186	14.4643
2485000000	51.7006	14.4779
2490000000	51.6778	14.4904
2495000000	51.6774	14.5081
2500000000	51.6918	14.4991

Attachment 3. – Probe Calibration Data

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

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Accreditation No.: SCS 108

Client HCT (Dymstec) Certificate No: ET3-1630_Nov11

CALIBRATION CERTIFICATE

Object ET3DV6 - SN:1630

Calibration procedure(s) QA CAL-01.v8, QA CAL-12.v7, QA CAL-23.v4, QA CAL-25.v4
Calibration procedure for dosimetric E-field probes

Calibration date: November 18, 2011

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	31-Mar-11 (No. 217-01372)	Apr-12
Power sensor E4412A	MY41498087	31-Mar-11 (No. 217-01372)	Apr-12
Reference 3 dB Attenuator	SN: S5054 (3c)	29-Mar-11 (No. 217-01369)	Apr-12
Reference 20 dB Attenuator	SN: S5086 (20b)	29-Mar-11 (No. 217-01367)	Apr-12
Reference 30 dB Attenuator	SN: S5129 (30b)	29-Mar-11 (No. 217-01370)	Apr-12
Reference Probe ES3DV2	SN: 3013	29-Dec-10 (No. ES3-3013_Dec10)	Dec-11
DAE4	SN: 654	3-May-11 (No. DAE4-654_May11)	May-12
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Apr-11)	In house check: Apr-13
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-11)	In house check: Oct-12

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

Issued: November 18, 2011

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

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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 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, 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 ET3DV6

SN:1630

Manufactured: October 12, 2001
Calibrated: November 18, 2011

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

DASY/EASY - Parameters of Probe: ET3DV6 - SN:1630

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	1.71	1.62	1.60	± 10.1 %
DCP (mV)[B]	100.3	99.5	101.7	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dB	C dB	VR mV	Unc[E] (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	98.2	±2.7 %
			Y	0.00	0.00	1.00	101.9	
			Z	0.00	0.00	1.00	98.0	

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 max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: ET3DV6 - SN:1630

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	Depth (mm)	Unct. (k=2)
300	45.3	0.87	8.13	8.13	8.13	0.31	1.60	± 13.4 %
450	43.5	0.87	7.40	7.40	7.40	0.22	2.27	± 13.4 %
750	41.9	0.89	6.61	6.61	6.61	0.82	1.68	± 12.0 %
835	41.5	0.90	6.27	6.27	6.27	0.72	1.84	± 12.0 %
900	41.5	0.97	6.16	6.16	6.16	0.68	1.92	± 12.0 %
1450	40.5	1.20	5.57	5.57	5.57	0.54	2.48	± 12.0 %
1750	40.1	1.37	5.43	5.43	5.43	0.60	2.26	± 12.0 %
1900	40.0	1.40	5.17	5.17	5.17	0.63	2.15	± 12.0 %
1950	40.0	1.40	5.05	5.05	5.05	0.63	2.13	± 12.0 %
2450	39.2	1.80	4.57	4.57	4.57	0.81	1.74	± 12.0 %

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

DASY/EASY - Parameters of Probe: ET3DV6 - SN:1630

Calibration Parameter Determined in Body Tissue Simulating Media

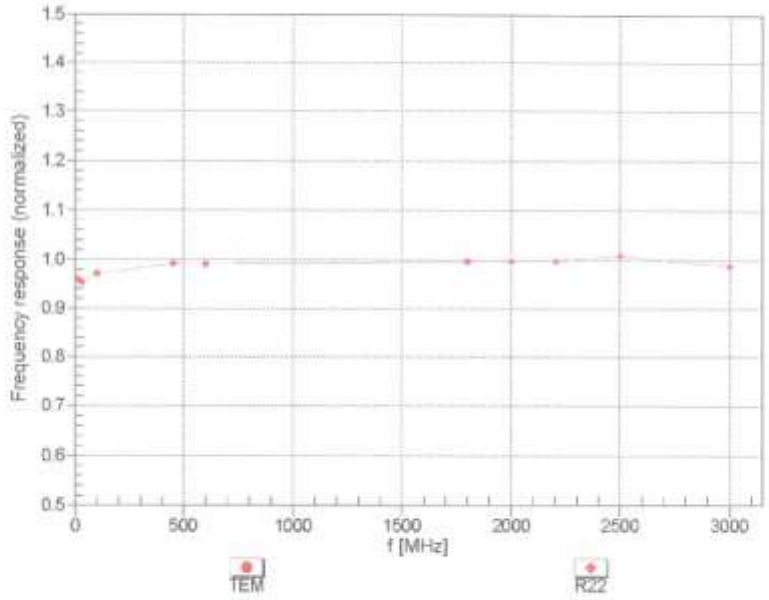
f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
300	58.2	0.92	7.96	7.96	7.96	0.29	2.29	± 13.4 %
450	56.7	0.94	7.74	7.74	7.74	0.16	2.25	± 13.4 %
750	55.5	0.96	6.36	6.36	6.36	0.75	1.84	± 12.0 %
835	55.2	0.97	6.27	6.27	6.27	0.72	1.88	± 12.0 %
1450	54.0	1.30	5.46	5.46	5.46	0.70	1.97	± 12.0 %
1750	53.4	1.49	4.95	4.95	4.95	0.59	2.72	± 12.0 %
1900	53.3	1.52	4.75	4.75	4.75	0.60	2.56	± 12.0 %
2450	52.7	1.95	4.30	4.30	4.30	1.00	1.29	± 12.0 %

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

ET3DV6- SN:1630 November 18, 2011

Frequency Response of E-Field

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



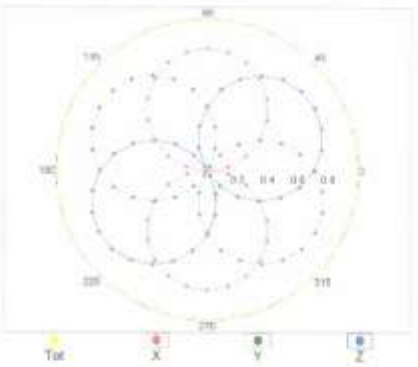
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

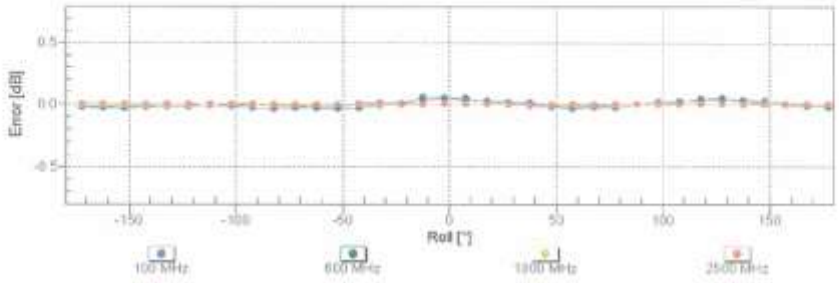
ET3DV6– SN:1630 November 18, 2011

Receiving Pattern (ϕ), ϑ = 0°

f=600 MHz,TEM

f=1800 MHz,R22

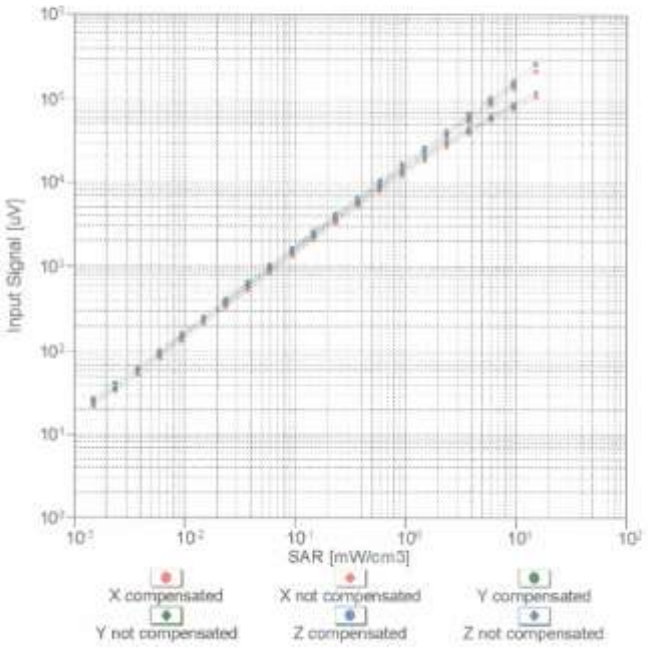


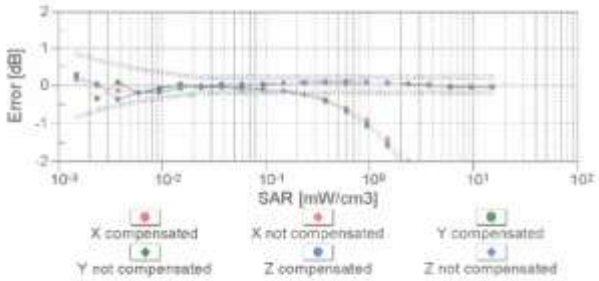


Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

ET3DV6- SN:1630 November 18, 2011

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



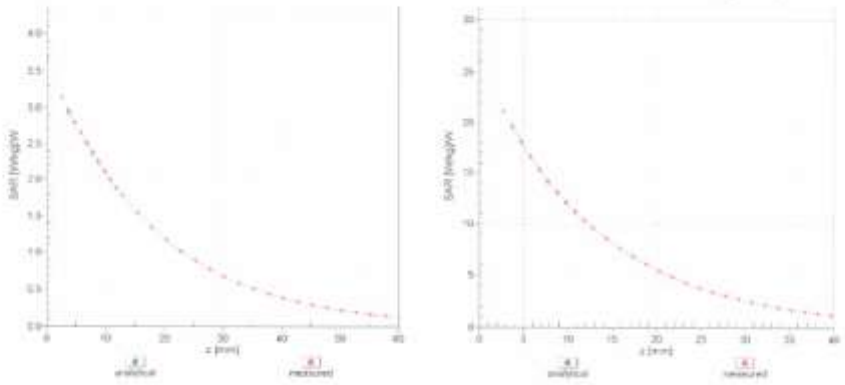


Uncertainty of Linearity Assessment: ± 0.6% (k=2)

ET3DV6- SN:1630 November 18, 2011

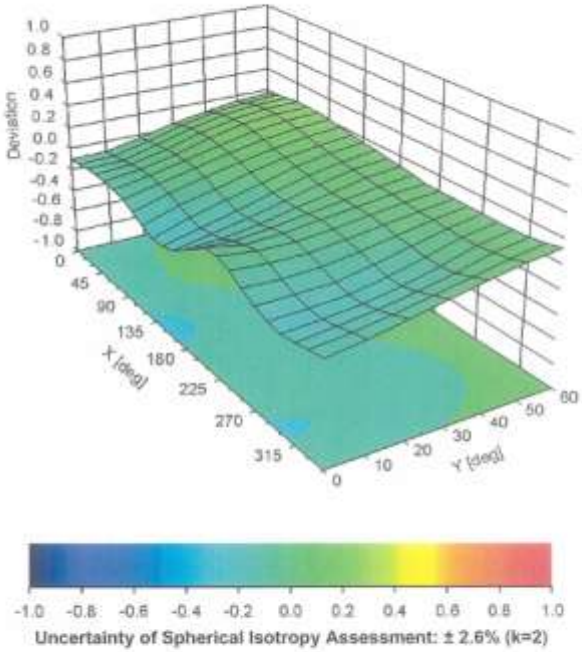
Conversion Factor Assessment

f = 900 MHz,WGLS R9 (H_convF) f = 1750 MHz,WGLS R22 (H_convF)



Deviation from Isotropy in Liquid

Error (ϕ, ϑ), f = 900 MHz



Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

DASY/EASY - Parameters of Probe: ET3DV6 - SN:1630

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	Not applicable
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	10 mm
Tip Diameter	6.8 mm
Probe Tip to Sensor X Calibration Point	2.7 mm
Probe Tip to Sensor Y Calibration Point	2.7 mm
Probe Tip to Sensor Z Calibration Point	2.7 mm
Recommended Measurement Distance from Surface	4 mm

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info@speag.com, http://www.speag.com

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Additional Conversion Factors

for Dosimetric E-Field Probe

Type:	**ET3DV6**
Serial Number:	**1630**
Place of Assessment:	**Zurich**
Date of Assessment:	**November 21, 2011**
Probe Calibration Date:	**November 18, 2011**

Schmid & Partner Engineering AG hereby certifies that conversion factor(s) of this probe have been evaluated on the date indicated above. The assessment was performed using the FDTD numerical code SEMCAD of Schmid & Partner Engineering AG. Since the evaluation is coupled with measured conversion factors, it has to be recalculated yearly, i.e., following the re-calibration schedule of the probe. The uncertainty of the numerical assessment is based on the extrapolation from measured value at 450, 900 MHz or at 1750 MHz.

Assessed by:

Schmid & Partner Engineering AG
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Zeughausstrasse 43, 8004 Zurich, Switzerland
Phone +41 44 245 9700, Fax +41 44 245 9779
info@speag.com, http://www.speag.com

Dosimetric E-Field Probe ET3DV6 - SN:1630

Conversion factor (± standard deviation)

150 ± 50 MHz	*ConvF*	8.03 ± 10%	ε_r = 52.3 ± 5% σ = 0.76 ± 5% mho/m (head tissue)
150 ± 50 MHz	*ConvF*	8.29 ± 10%	ε_r = 61.9 ± 5% σ = 0.80 ± 5% mho/m (body tissue)

Important Note:

For numerically assessed probe conversion factors, parameters Alpha and Delta in the DASY software must have the following entries: Alpha = 0 and Delta = 1.

Please see also DASY Manual.

Calibration Laboratory of
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Accreditation No.: SCS 108

Client HCT (Dymstec) Certificate No: ET3-1605_Apr12

CALIBRATION CERTIFICATE

Object ET3DV6 - SN:1605

Calibration procedure(s) QA CAL-01.v8, QA CAL-23.v4, QA CAL-25.v4
Calibration procedure for dosimetric E-field probes

Calibration date: April 26, 2012

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	29-Mar-12 (No. 217-01508)	Apr-13
Power sensor E4412A	MY41498087	29-Mar-12 (No. 217-01508)	Apr-13
Reference 3 dB Attenuator	SN: S5054 (3c)	27-Mar-12 (No. 217-01531)	Apr-13
Reference 20 dB Attenuator	SN: S5086 (20b)	27-Mar-12 (No. 217-01529)	Apr-13
Reference 30 dB Attenuator	SN: S5129 (30b)	27-Mar-12 (No. 217-01532)	Apr-13
Reference Probe ES3DV2	SN: 3013	29-Dec-11 (No. ES3-3013_Dec11)	Dec-12
DAE4	SN: 660	10-Jan-12 (No. DAE4-660_Jan12)	Jan-13
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Apr-11)	In house check: Apr-13
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-11)	In house check: Oct-12

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

Issued: April 26, 2012

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

Certificate No: ET3-1605_Apr12 Page 1 of 11

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Glossary:

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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

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Methods Applied and Interpretation of Parameters:

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- *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, 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 ET3DV6

SN:1605

Manufactured: July 27, 2001
Calibrated: April 26, 2012

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

ET3DV6- SN:1605 April 26, 2012

DASY/EASY - Parameters of Probe: ET3DV6 - SN:1605

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	1.60	1.96	1.67	± 10.1 %
DCP (mV)[B]	98.4	97.0	98.0	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dB	C dB	VR mV	Unc[C] (k=2)
0	CW	0.00	X	0.00	0.00	1.00	166.8	±3.0 %
			Y	0.00	0.00	1.00	149.9	
			Z	0.00	0.00	1.00	177.8	

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 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.
[C] Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

Certificate No: ET3-1605_Apr12 Page 4 of 11

DASY/EASY - Parameters of Probe: ET3DV6 - SN:1605

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	Depth (mm)	Unct. (k=2)
750	41.9	0.89	7.03	7.03	7.03	0.25	3.00	± 12.0 %
835	41.5	0.90	6.64	6.64	6.64	0.29	3.00	± 12.0 %
900	41.5	0.97	6.52	6.52	6.52	0.23	3.00	± 12.0 %
1450	40.5	1.20	5.73	5.73	5.73	0.77	2.20	± 12.0 %
1750	40.1	1.37	5.51	5.51	5.51	0.80	1.76	± 12.0 %
1900	40.0	1.40	5.26	5.26	5.26	0.80	1.91	± 12.0 %
1950	40.0	1.40	5.08	5.08	5.08	0.60	1.62	± 12.0 %
2450	39.2	1.80	4.59	4.59	4.59	0.80	2.02	± 12.0 %

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

DASY/EASY - Parameters of Probe: ET3DV6 - SN:1605

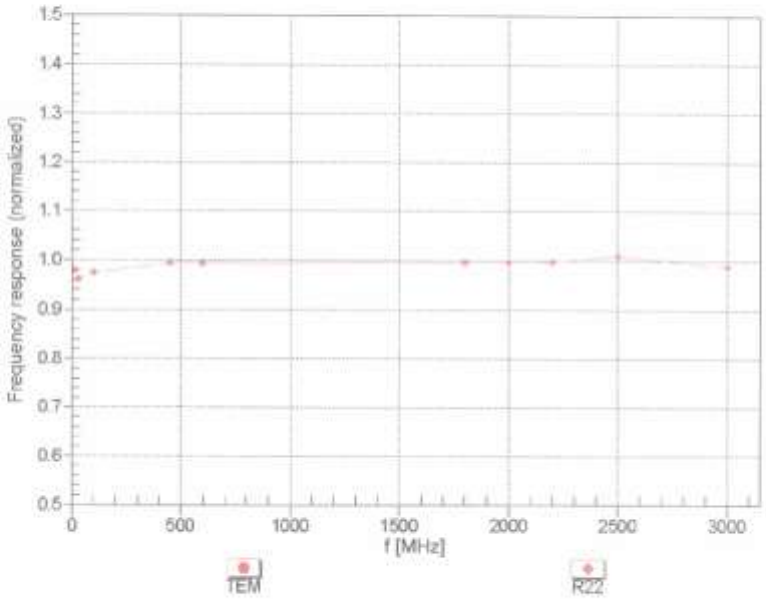
Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	55.5	0.96	6.61	6.61	6.61	0.22	3.00	± 12.0 %
835	55.2	0.97	6.52	6.52	6.52	0.28	3.00	± 12.0 %
1750	53.4	1.49	4.87	4.87	4.87	0.80	2.51	± 12.0 %
1900	53.3	1.52	4.64	4.64	4.64	0.78	2.32	± 12.0 %
2450	52.7	1.95	4.07	4.07	4.07	0.78	2.18	± 12.0 %

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

ET3DV6- SN:1605 April 26, 2012

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



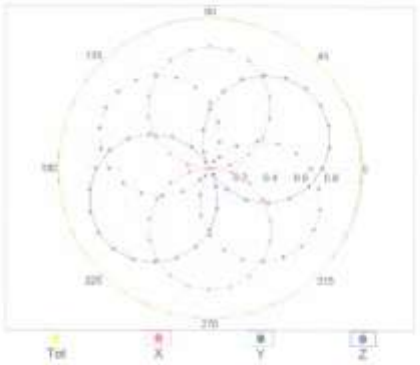
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

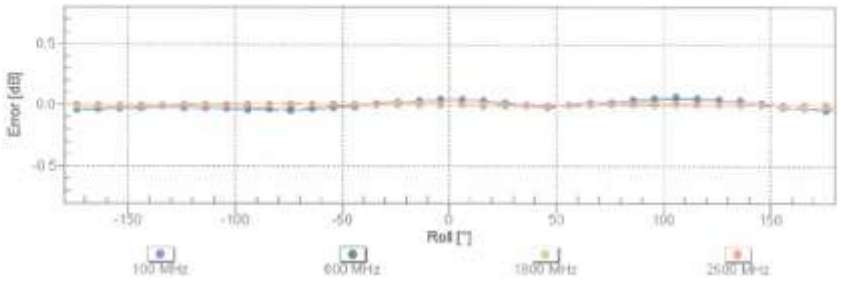
ET3DV6– SN:1605 April 20, 2012

Receiving Pattern (ϕ), ϑ = 0°

f=600 MHz,TEM

f=1800 MHz,R22

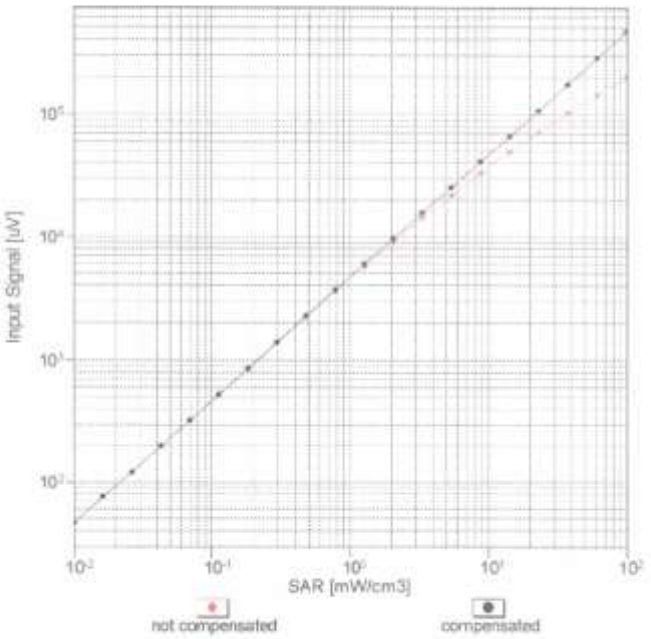


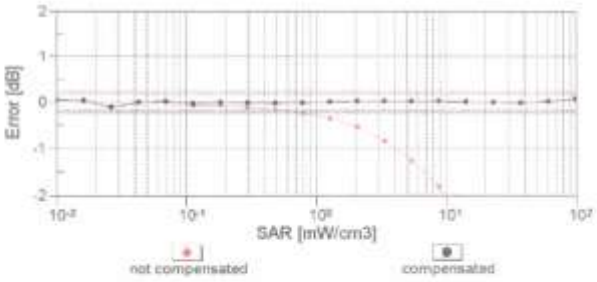


Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

ET3DV6- SN:1605 April 26, 2012

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



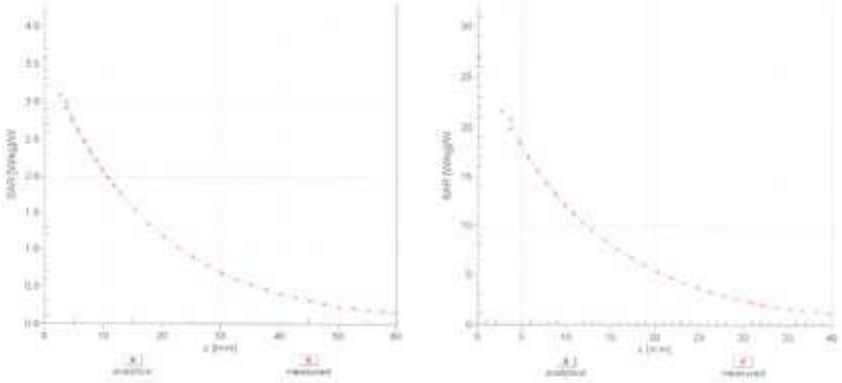


Uncertainty of Linearity Assessment: ± 0.6% (k=2)

ET3DV6– SN:1605 April 26, 2012

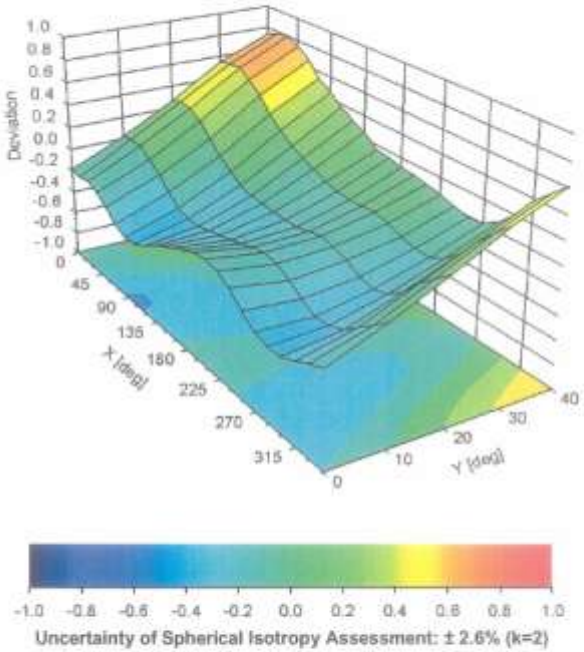
Conversion Factor Assessment

f = 900 MHz,WGLS R9 (H_convF) f = 1750 MHz,WGLS R22 (H_convF)



Deviation from Isotropy in Liquid

Error (ϕ, ϑ), f = 900 MHz



Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

DASY/EASY - Parameters of Probe: ET3DV6 - SN:1605

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	56
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	10 mm
Tip Diameter	6.8 mm
Probe Tip to Sensor X Calibration Point	2.7 mm
Probe Tip to Sensor Y Calibration Point	2.7 mm
Probe Tip to Sensor Z Calibration Point	2.7 mm
Recommended Measurement Distance from Surface	4 mm

Attachment 4. – Dipole Calibration Data

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Accreditation No.: SCS 108

Client HCT (Dymstec) Certificate No: D835V2-441_May12

CALIBRATION CERTIFICATE

Object D835V2 - SN: 441

Calibration procedure(s) QA CAL-05.v8
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: May 16, 2012

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 EPM-442A	GB37480704	05-Oct-11 (No. 217-01451)	Oct-12
Power sensor HP 8481A	US37292783	05-Oct-11 (No. 217-01451)	Oct-12
Reference 20 dB Attenuator	SN: 5058 (20k)	27-Mar-12 (No. 217-01530)	Apr-13
Type-N mismatch combination	SN: 5047.2 / 06327	27-Mar-12 (No. 217-01533)	Apr-13
Reference Probe ES3DV3	SN: 3205	30-Dec-11 (No. ES3-3205_Dec11)	Dec-12
DAE4	SN: 601	04-Jul-11 (No. DAE4-601_Jul11)	Jul-12

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-11)	In house check: Oct-13
RF generator R&S SMT-06	100005	04-Aug-99 (in house check Oct-11)	In house check: Oct-13
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-11)	In house check: Oct-12

	Name	Function	Signature
Calibrated by:	Israe El-Naouq	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: May 16, 2012

Calibration Laboratory of
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Engineering AG
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Accreditation No.: SCS 108

Glossary:

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

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
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

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%.

Measurement Conditions

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

DASY Version	DASY5	V52.8.1
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.6 ± 6 %	0.89 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.35 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**9.43 mW /g ± 17.0 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.54 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**6.18 mW /g ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.3 ± 6 %	1.00 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.44 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**9.50 mW / g ± 17.0 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.60 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**6.27 mW / g ± 16.5 % (k=2)**

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	51.1 Ω - 5.8 jΩ
Return Loss	- 24.6 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	47.0 Ω - 8.1 jΩ
Return Loss	- 21.0 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.372 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
Manufactured on	March 09, 2001

DASY5 Validation Report for Head TSL

Date: 16.05.2012

Test Laboratory: SPEAG, Zurich, Switzerland

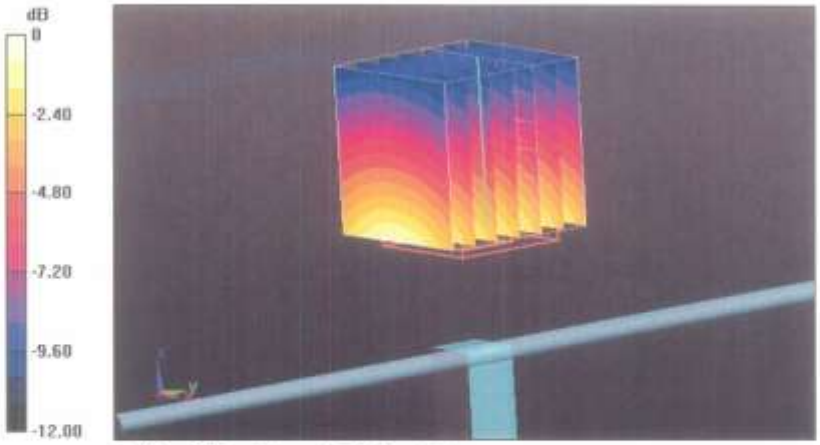
DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 441

Communication System: CW; Frequency: 835 MHz
Medium parameters used: f = 835 MHz; σ = 0.89 mho/m; ε_r = 40.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

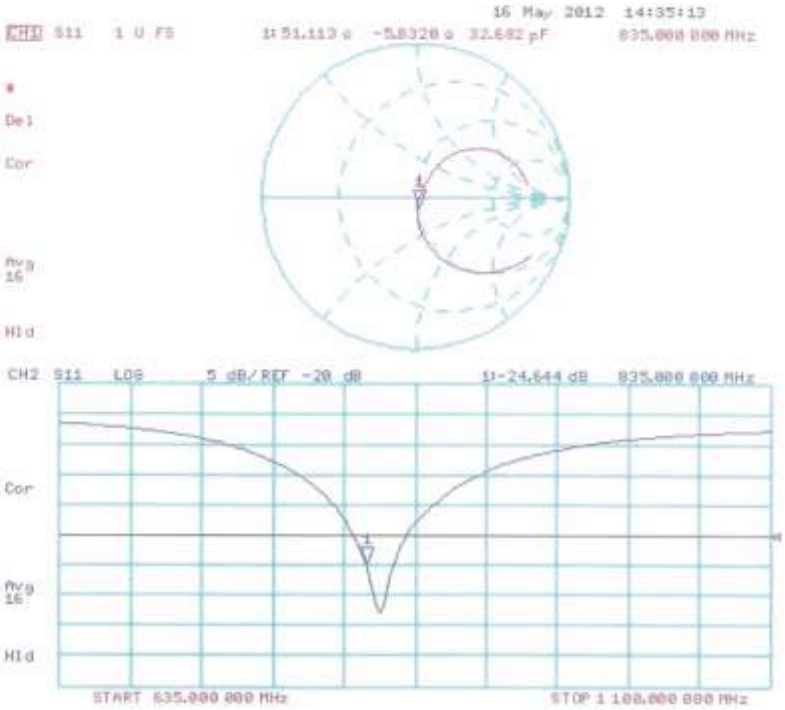
- Probe: ES3DV3 - SN3205; ConvF(6.07, 6.07, 6.07); Calibrated: 30.12.2011;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.8.1(838); SEMCAD X 14.6.5(6469)

Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm 2/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.129 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 3.474 mW/g
SAR(1 g) = 2.35 mW/g; SAR(10 g) = 1.54 mW/g
Maximum value of SAR (measured) = 2.73 mW/g



0 dB = 2.73 mW/g = 8.72 dB mW/g

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 16.05.2012

Test Laboratory: SPEAG, Zurich, Switzerland

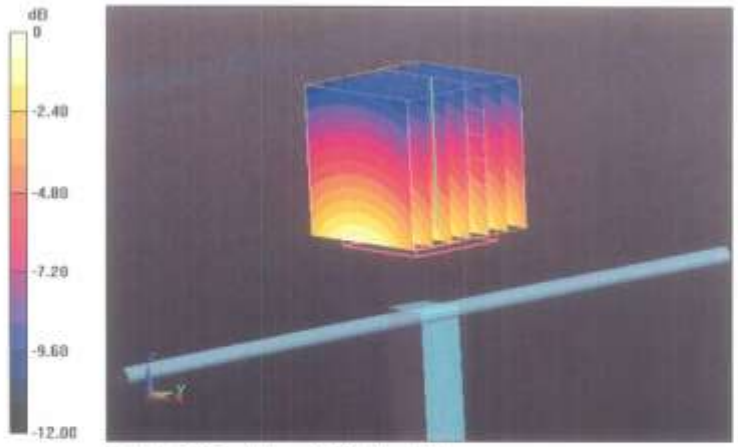
DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 441

Communication System: CW; Frequency: 835 MHz
Medium parameters used: f = 835 MHz; σ = 1 mho/m; ε_r = 54.3; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

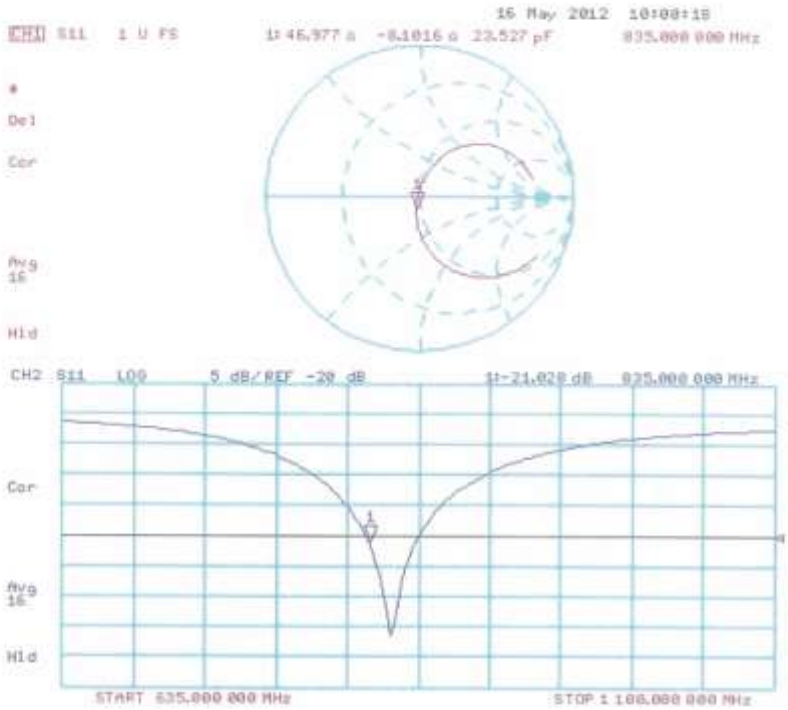
- Probe: ES3DV3 - SN3205; ConvF(6.02, 6.02, 6.02); Calibrated: 30.12.2011;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.8.1(838); SEMCAD X 14.6.5(6469)

Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.054 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 3.533 mW/g
SAR(1 g) = 2.44 mW/g; SAR(10 g) = 1.6 mW/g
Maximum value of SAR (measured) = 2.82 mW/g



0 dB = 2.82 mW/g = 9.00 dB mW/g

Impedance Measurement Plot for Body TSL



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Accreditation No.: SCS 108

Client HCT (Dymstec)

Certificate No: D1900V2-5d032_Jul11

CALIBRATION CERTIFICATE

Object D1900V2 - SN: 5d032

Calibration procedure(s) QA CAL-05.v8
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: July 22, 2011

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 EPM-442A	GB37480704	06-Oct-10 (No. 217-01266)	Oct-11
Power sensor HP 8481A	US37292783	06-Oct-10 (No. 217-01266)	Oct-11
Reference 20 dB Attenuator	SN: S5086 (20b)	29-Mar-11 (No. 217-01367)	Apr-12
Type-N mismatch combination	SN: 5047.2 / 06327	29-Mar-11 (No. 217-01371)	Apr-12
Reference Probe ES3DV3	SN: 3205	29-Apr-11 (No. ES3-3205_Apr11)	Apr-12
DAE4	SN: 601	04-Jul-11 (No. DAE4-601_Jul11)	Jul-12

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	04-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

	Name	Function	Signature
Calibrated by:	Dimce Iliev	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: August 2, 2011

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Accreditation No.: **SCS 108**

Glossary:

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

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
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

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.

Measurement Conditions

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

DASY Version	DASY5	V52.6.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1900 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	39.1 ± 6 %	1.42 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	10.1 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**39.9 mW /g ± 17.0 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	5.29 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**21.0 mW /g ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Body TSL parameters	22.0 °C	53.3	1.52 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	52.3 ± 6 %	1.53 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	10.3 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**40.9 mW / g ± 17.0 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.39 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**21.5 mW / g ± 16.5 % (k=2)**

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	52.6 Ω + 6.5 jΩ
Return Loss	- 23.3 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	46.6 Ω + 6.0 jΩ
Return Loss	- 22.9 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.190 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.
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
Manufactured on	March 17, 2003

DASY5 Validation Report for Head TSL

Date: 20.07.2011

Test Laboratory: SPEAG, Zurich, Switzerland

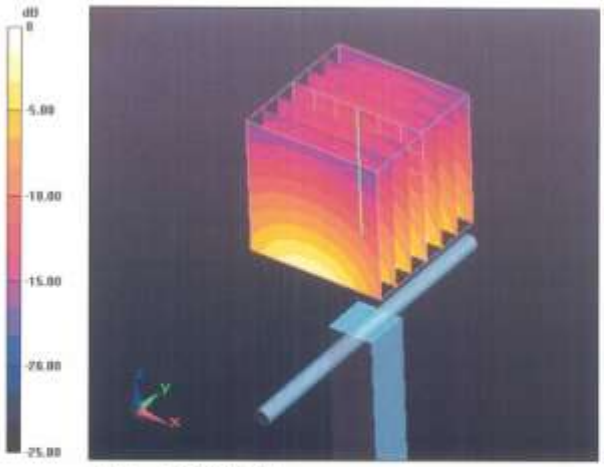
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d032

Communication System: CW; Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.42 mho/m; ε_r = 39.1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

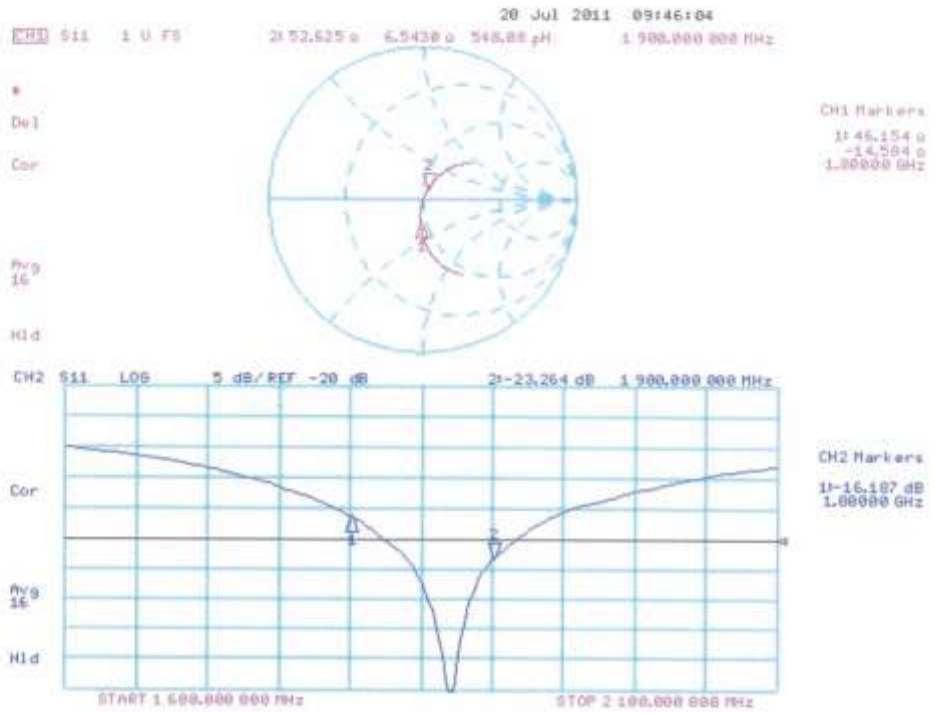
- Probe: ES3DV3 - SN3205; ConvF(5.01, 5.01, 5.01); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 98.253 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 18.469 W/kg
SAR(1 g) = 10.1 mW/g; SAR(10 g) = 5.29 mW/g
Maximum value of SAR (measured) = 12.721 mW/g



0 dB = 12.720mW/g

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 22.07.2011

Test Laboratory: SPEAG, Zurich, Switzerland

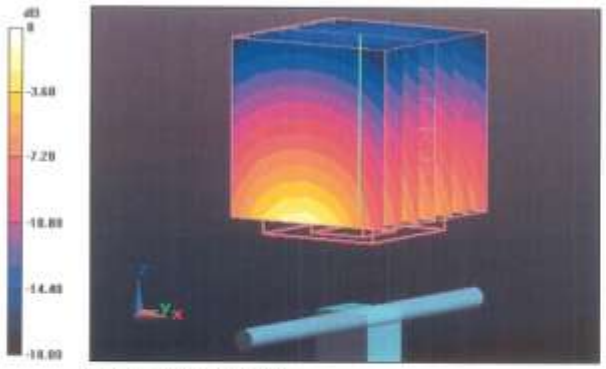
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d032

Communication System: CW; Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.53 mho/m; ε_r = 52.3; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

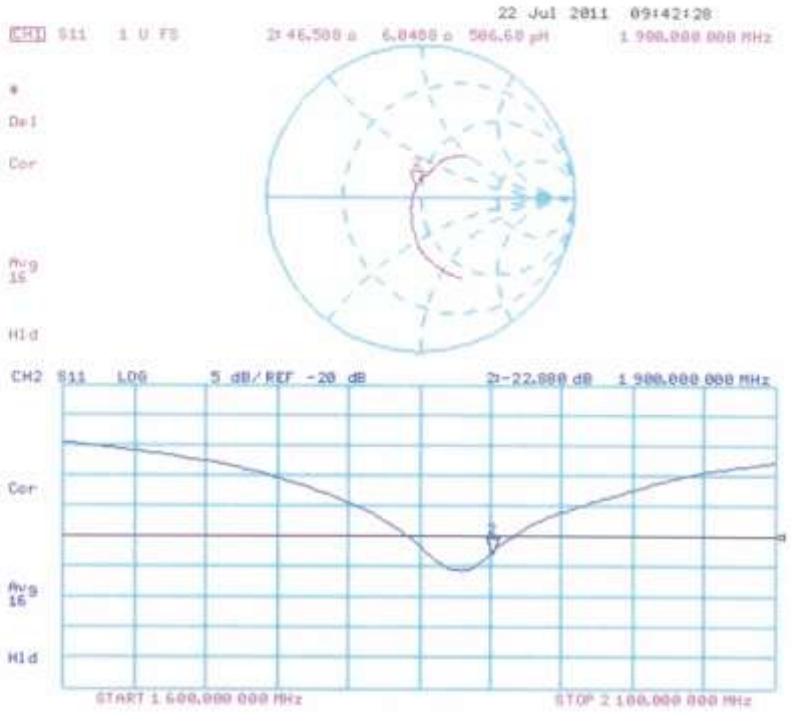
- Probe: ES3DV3 - SN3205; ConvF(4.62, 4.62, 4.62); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 95.827 V/m; Power Drift = 0.0078 dB
Peak SAR (extrapolated) = 18.111 W/kg
SAR(1 g) = 10.3 mW/g; SAR(10 g) = 5.39 mW/g
Maximum value of SAR (measured) = 12.898 mW/g



0 dB = 12.900mW/g

Impedance Measurement Plot for Body TSL



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Client HCT (Dymstec)

Certificate No: D1900V2-5d032_Jul12

CALIBRATION CERTIFICATE

Object D1900V2 - SN: 5d032

Calibration procedure(s) QA CAL-05.v8
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: July 20, 2012

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 EPM-442A	GB37480704	05-Oct-11 (No. 217-01451)	Oct-12
Power sensor HP 8481A	US37292783	05-Oct-11 (No. 217-01451)	Oct-12
Reference 20 dB Attenuator	SN: 5058 (20k)	27-Mar-12 (No. 217-01530)	Apr-13
Type-N mismatch combination	SN: 5047.2 / 06327	27-Mar-12 (No. 217-01533)	Apr-13
Reference Probe ES3DV3	SN: 3205	30-Dec-11 (No. ES3-3205_Dec11)	Dec-12
DAE4	SN: 601	27-Jun-12 (No. DAE4-601_Jun12)	Jun-13

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-11)	In house check: Oct-13
RF generator R&S SMT-06	100005	04-Aug-99 (in house check Oct-11)	In house check: Oct-13
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-11)	In house check: Oct-12

	Name	Function	Signature
Calibrated by:	Dimce Iliev	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: July 20, 2012

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Certificate No: D1900V2-5d032_Jul12 Page 1 of 8

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Accreditation No.: SCS 108

Glossary:

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

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
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

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%.

Measurement Conditions

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

DASY Version	DASY5	V52.8.1
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1900 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	39.9 ± 6 %	1.38 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	---	---

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.68 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**39.0 mW /g ± 17.0 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	5.11 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**20.5 mW /g ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Body TSL parameters	22.0 °C	53.3	1.52 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	52.6 ± 6 %	1.52 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	---	---

SAR result with Body TSL

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	10.0 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**39.9 mW / g ± 17.0 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.30 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**21.2 mW / g ± 16.5 % (k=2)**

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	50.0 Ω + 3.1 jΩ
Return Loss	- 30.1 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	46.2 Ω + 3.7 jΩ
Return Loss	- 25.2 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.194 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
Manufactured on	March 17, 2003

DASY5 Validation Report for Head TSL

Date: 20.07.2012

Test Laboratory: SPEAG, Zurich, Switzerland

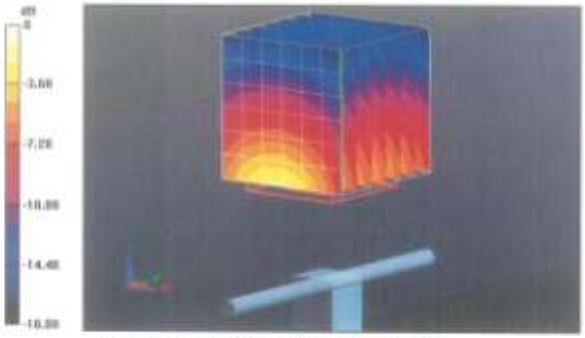
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d032

Communication System: CW; Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.38 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

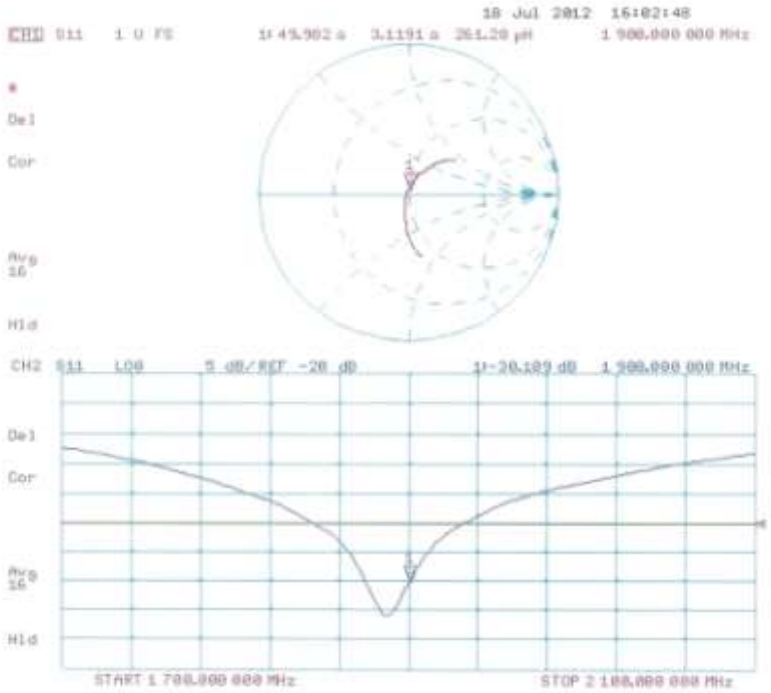
- Probe: ES3DV3 - SN3205; ConvF(5.01, 5.01, 5.01); Calibrated: 30.12.2011;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 27.06.2012
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.8.1(838); SEMCAD X 14.6.5(6469)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 96.864 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 17.209 mW/g
SAR(1 g) = 9.68 mW/g; SAR(10 g) = 5.11 mW/g
Maximum value of SAR (measured) = 12.1 mW/g



0 dB = 12.1 mW/g = 21.66 dB mW/g

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 20.07.2012

Test Laboratory: SPEAG, Zurich, Switzerland

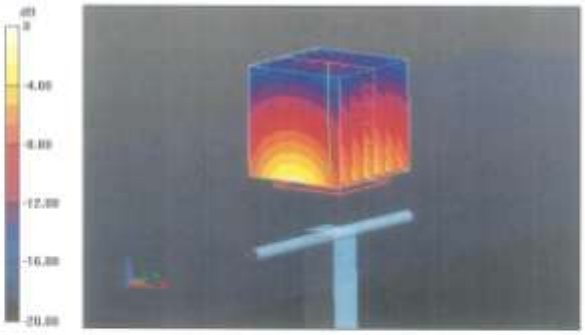
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d032

Communication System: CW; Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.52 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

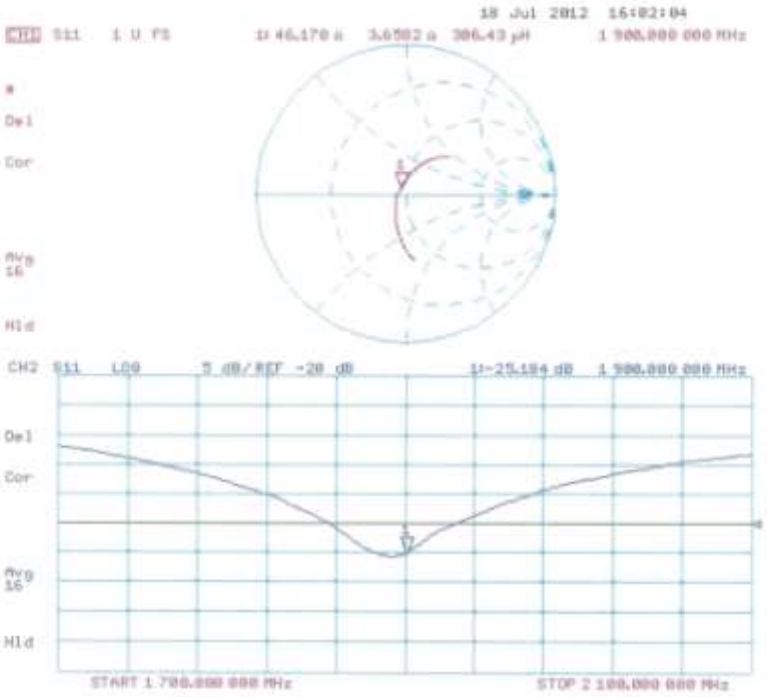
- Probe: ES3DV3 - SN3205; ConvF(4.62, 4.62, 4.62); Calibrated: 30.12.2011;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 27.06.2012
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.8.1(838); SEMCAD X 14.6.5(6469)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 95.470 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 17.332 mW/g
SAR(1 g) = 10 mW/g; SAR(10 g) = 5.3 mW/g
Maximum value of SAR (measured) = 12.6 mW/g



0 dB = 12.6 mW/g = 22.01 dB mW/g

Impedance Measurement Plot for Body TSL



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Client HCT (Dymstec)

Certificate No: D2450V2-743_Aug11

CALIBRATION CERTIFICATE

Object D2450V2 - SN: 743

Calibration procedure(s) QA CAL-05.v8
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: August 29, 2011

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 EPM-442A	GB37480704	06-Oct-10 (No. 217-01266)	Oct-11
Power sensor HP 8481A	US37292783	06-Oct-10 (No. 217-01266)	Oct-11
Reference 20 dB Attenuator	SN: S5086 (20b)	29-Mar-11 (No. 217-01367)	Apr-12
Type-N mismatch combination	SN: 5047.2 / 08327	29-Mar-11 (No. 217-01371)	Apr-12
Reference Probe ES3DV3	SN: 3205	29-Apr-11 (No. ES3-3205_Apr11)	Apr-12
DAE4	SN: 601	04-Jul-11 (No. DAE4-601_Jul11)	Jul-12

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	04-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

	Name	Function	Signature
Calibrated by:	Dimce Iliev	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: August 29, 2011

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Accreditation No.: SCS 108

Glossary:

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

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
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

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.

Measurement Conditions

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

DASY Version	DASY5	V52.6.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat 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	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.4 ± 6 %	1.85 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.7 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**53.8 mW /g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.40 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**25.4 mW /g ± 16.5 % (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	51.8 ± 6 %	2.02 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	13.2 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**51.7 mW / g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.11 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**24.2 mW / g ± 16.5 % (k=2)**

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	55.0 Ω + 4.8 jΩ
Return Loss	- 23.6 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	50.3 Ω + 5.8 jΩ
Return Loss	- 24.8 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.160 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.
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
Manufactured on	December 01, 2003

DASY5 Validation Report for Head TSL

Date: 29.08.2011

Test Laboratory: SPEAG, Zurich, Switzerland

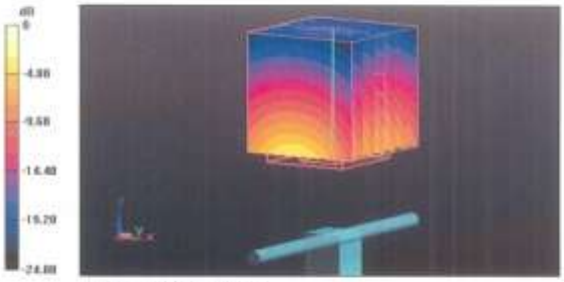
DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 743

Communication System: CW; Frequency: 2450 MHz
Medium parameters used: f = 2450 MHz; σ = 1.85 mho/m; ε_r = 38.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

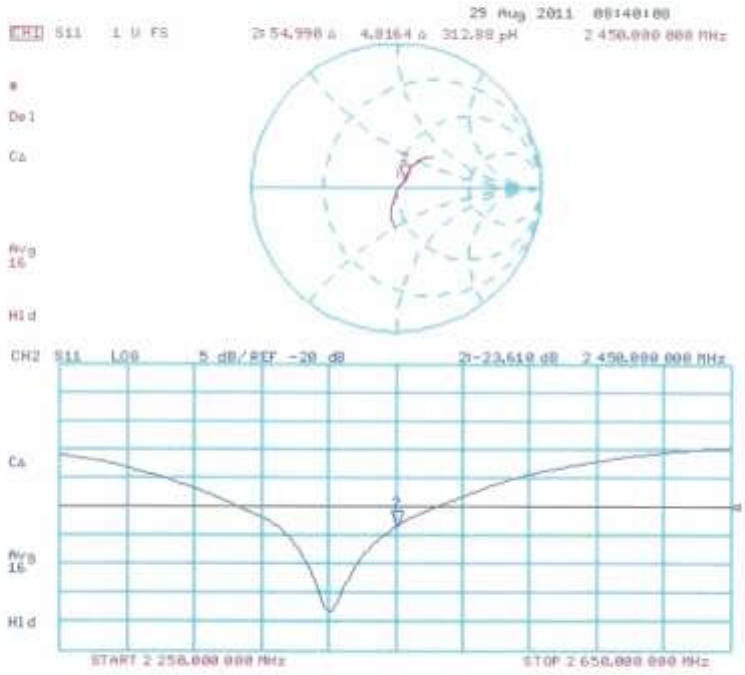
- Probe: ES3DV3 - SN3205; ConvF(4.45, 4.45, 4.45); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 101.2 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 28.291 W/kg
SAR(1 g) = 13.7 mW/g; SAR(10 g) = 6.4 mW/g
Maximum value of SAR (measured) = 17.657 mW/g



0 dB = 17.660mW/g

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 29.08.2011

Test Laboratory: SPEAG, Zurich, Switzerland

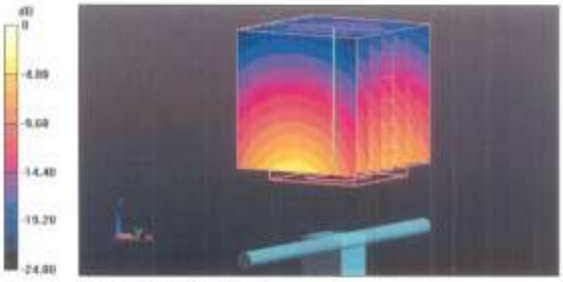
DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 743

Communication System: CW; Frequency: 2450 MHz
Medium parameters used: f = 2450 MHz; σ = 2.02 mho/m; ε_r = 51.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

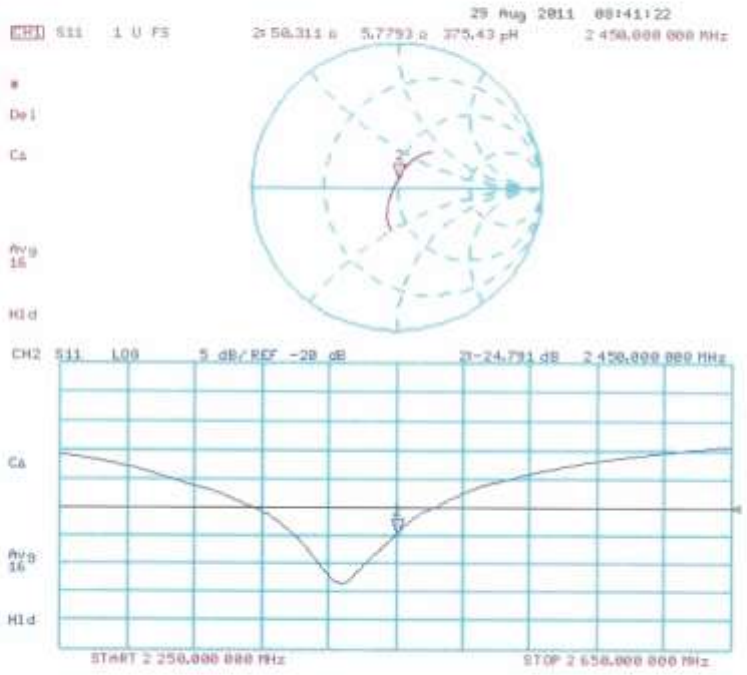
- Probe: ES3DV3 - SN3205; ConvF(4.26, 4.26, 4.26); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 95.903 V/m; Power Drift = -0.0051 dB
Peak SAR (extrapolated) = 27.107 W/kg
SAR(1 g) = 13.2 mW/g; SAR(10 g) = 6.11 mW/g
Maximum value of SAR (measured) = 17.329 mW/g



0 dB = 17.330mW/g

Impedance Measurement Plot for Body TSL



Calibration Laboratory of
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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 HCT (Dymstec) Certificate No: D750V3-1014_Jul11

CALIBRATION CERTIFICATE

Object D750V3 - SN:1014

Calibration procedure(s) QA CAL-05.v8
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: July 25, 2011

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 EPM-442A	GB37480704	06-Oct-10 (No. 217-01266)	Oct-11
Power sensor HP 8481A	US37292783	06-Oct-10 (No. 217-01266)	Oct-11
Reference 20 dB Attenuator	SN: S5086 (20b)	29-Mar-11 (No. 217-01367)	Apr-12
Type-N mismatch combination	SN: 5047.2 / 06327	29-Mar-11 (No. 217-01371)	Apr-12
Reference Probe ES3DV3	SN: 3205	29-Apr-11 (No. ES3-3205_Apr11)	Apr-12
DAE4	SN: 601	04-Jul-11 (No. DAE4-601_Jul11)	Jul-12

Secondary Standards	ID #	Check Data (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	04-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

	Name	Function	Signature
Calibrated by:	Claudio Leubler	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: July 25, 2011

Calibration Laboratory of
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Zeughausstrasse 43, 8004 Zurich, Switzerland

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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
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

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
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

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.

Measurement Conditions

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

DASY Version	DASY5	V52.6.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	41.7 ± 6 %	0.91 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	---	---

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.15 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**8.44 mW /g ± 17.0 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.40 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**5.52 mW /g ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Body TSL parameters	22.0 °C	55.5	0.96 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	55.2 ± 6 %	0.96 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	---	---

SAR result with Body TSL

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.22 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**8.87 mW / g ± 17.0 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.47 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**5.88 mW / g ± 16.5 % (k=2)**

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	53.3 Ω + 0.4 jΩ
Return Loss	- 30.0 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	49.0 Ω - 2.7 jΩ
Return Loss	- 30.8 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.040 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.
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
Manufactured on	March 22, 2010

DASY5 Validation Report for Head TSL

Date: 25.07.2011

Test Laboratory: SPEAG, Zurich, Switzerland

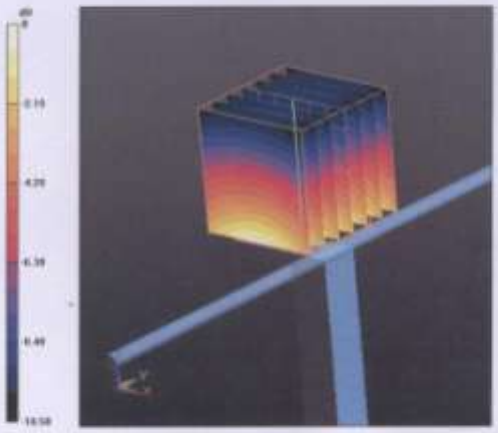
DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1014

Communication System: CW; Frequency: 750 MHz
Medium parameters used: f = 750 MHz; σ = 0.91 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.33, 6.33, 6.33); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

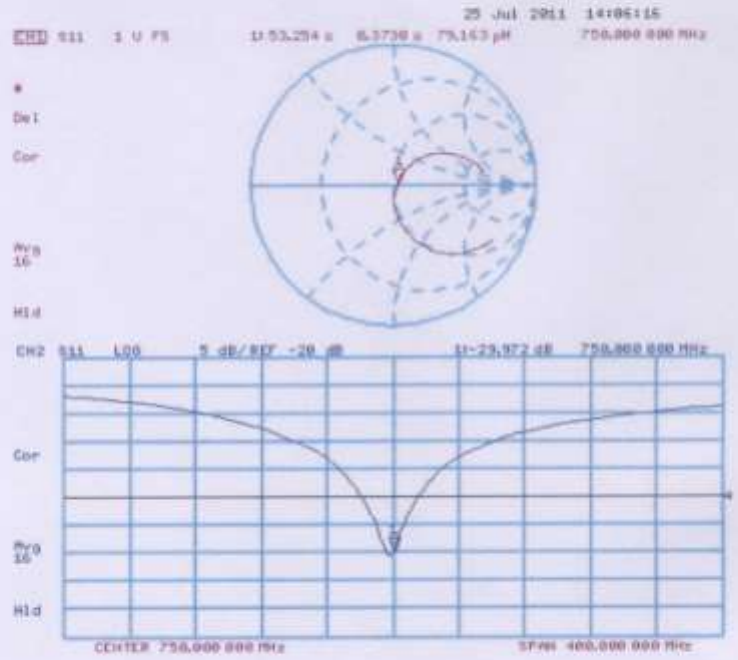
Dipole Calibration for Head Tissue/Pin=250mW; dip=15mm; dist=3.0mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 51.352 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 3.258 W/kg
SAR(1 g) = 2.15 mW/g; SAR(10 g) = 1.4 mW/g
Maximum value of SAR (measured) = 2.524 mW/g



0 dB = 2.520mW/g

Certificate No: D750V3-1014_Jul11 Page 5 of 8

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 25.07.2011

Test Laboratory: SPEAG, Zurich, Switzerland

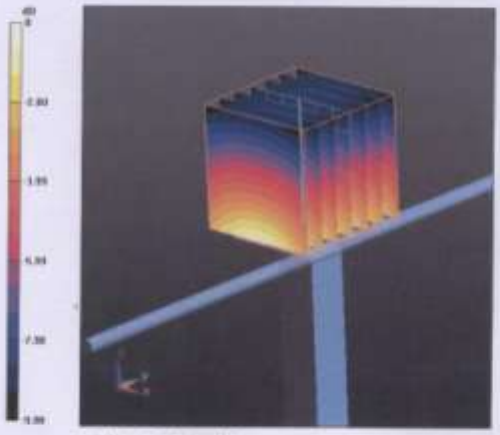
DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1014

Communication System: CW; Frequency: 750 MHz
Medium parameters used: f = 750 MHz; σ = 0.96 mho/m; ε_r = 55.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.12, 6.12, 6.12); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Dipole Calibration for Body Tissue/Pin=250mW; dip=15mm; dist=3.0mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.652 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 3.311 W/kg
SAR(1 g) = 2.22 mW/g; SAR(10 g) = 1.47 mW/g
Maximum value of SAR (measured) = 2.584 mW/g



0 dB = 2.580mW/g

Certificate No: D750V3-1014_Jul11 Page 7 of 8

Impedance Measurement Plot for Body TSL