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Date: 2016-5-23

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 GSM850 190CH Right touch-Second Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, HW-GSM\GPRS\EGPRS-1TS (0); Frequency: 836.6 MHz;Duty Cycle: 1:8.30042
Medium parameters used: f = 837 MHz; $\sigma$ = 0.894 S/m; $\varepsilon_r$ = 40.698; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY Configuration:

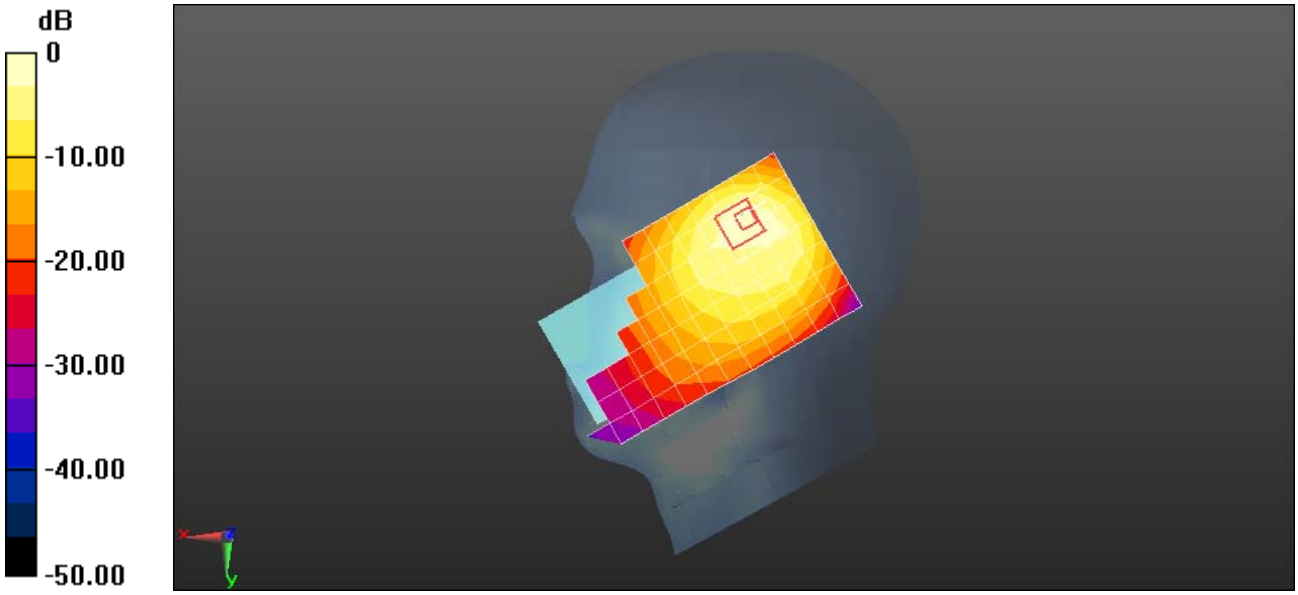
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.32, 6.32, 6.32); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM2; Type: SAM; Serial: TP:1474
- ¿ DASY52 52.8.8(1222);

## Configuration/Head/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.50 W/kg

## Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.80 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 3.02 W/kg
**SAR(1 g) = 1.18 W/kg; SAR(10 g) = 0.571 W/kg**
Maximum value of SAR (measured) = 1.56 W/kg




0 dB = 1.50 W/kg = 1.76 dBW/kg

Date: 2016-5-27

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 GSM850 190CH Front Side 15mm with Battery 3-Second Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, HW-GSM\GPRS\EGPRS-1TS (0); Frequency: 836.6 MHz;Duty Cycle: 1:8.30042
Medium parameters used: f = 837 MHz; $\sigma$ = 1.006 S/m; $\varepsilon_r$ = 55.675; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

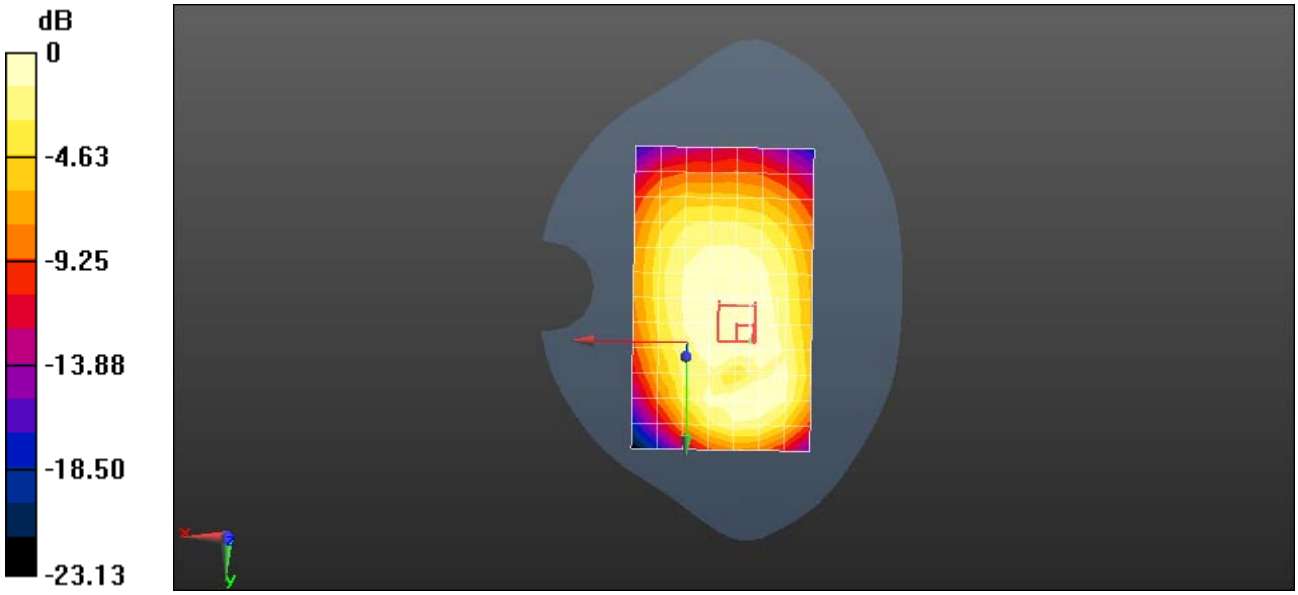
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.24, 6.24, 6.24); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

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

## Configuration/Body/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.65 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.365 W/kg
**SAR(1 g) = 0.284 W/kg; SAR(10 g) = 0.214 W/kg**
Maximum value of SAR (measured) = 0.313 W/kg




0 dB = 0.314 W/kg = -5.03 dBW/kg

Date: 2016-5-27

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 GSM850 GPRS 2TS 190CH Front Side 10mm-Second Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, HW-GSM\GPRS\EGPRS-2TS (0); Frequency: 836.6 MHz;Duty Cycle: 1:4.10015
Medium parameters used: f = 837 MHz; $\sigma$ = 1.006 S/m; $\varepsilon_r$ = 55.675; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

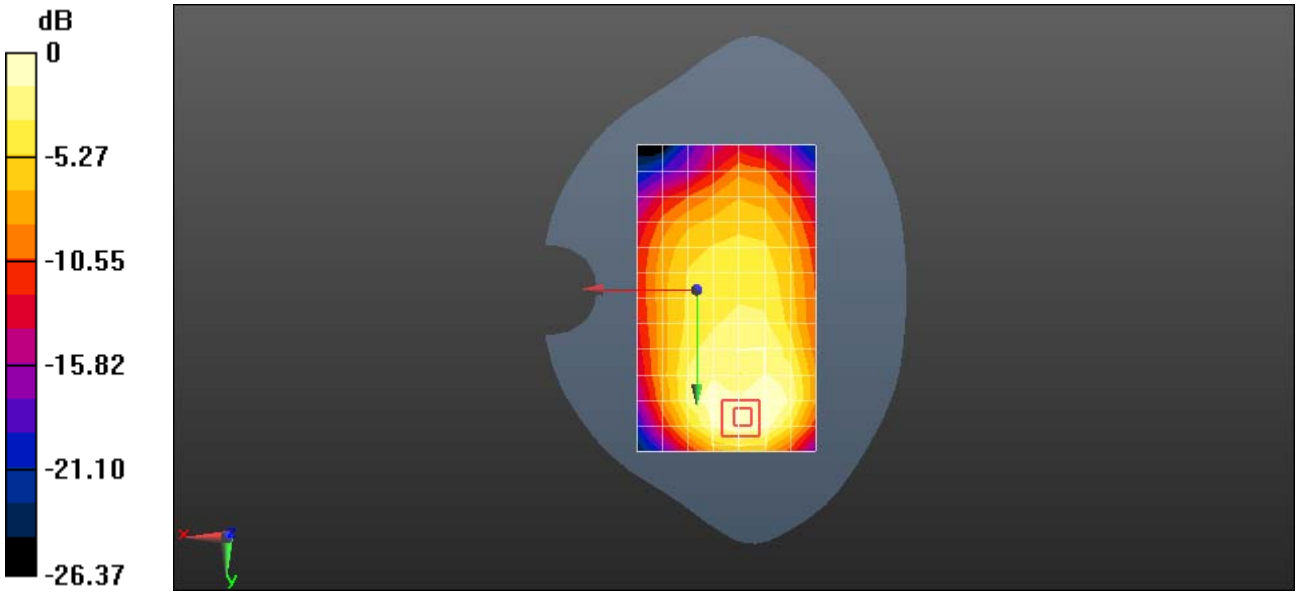
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.24, 6.24, 6.24); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.559 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.77 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.800 W/kg
**SAR(1 g) = 0.452 W/kg; SAR(10 g) = 0.253 W/kg**
Maximum value of SAR (measured) = 0.548 W/kg




0 dB = 0.559 W/kg = -2.53 dBW/kg

Date: 2016-5-23

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 UMTS Band V 4182CH Right touch-Second Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, HW-UMTS-FDD(WCDMA) (0); Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.4 MHz; $\sigma$ = 0.893 S/m; $\varepsilon_r$ = 40.702; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3168; ConvF(6.32, 6.32, 6.32); Calibrated: 2015-9-28;
- Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- Phantom: SAM2; Type: SAM; Serial: TP:1474
- DASY52 52.8.8(1222);

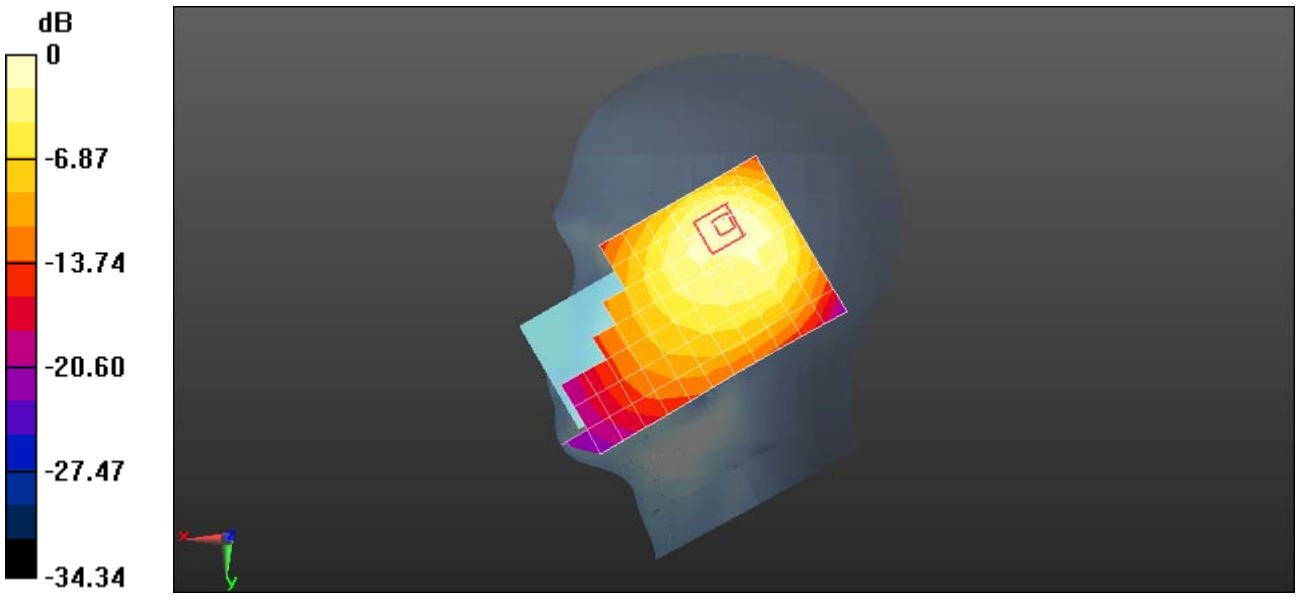
## Configuration/Head/Area Scan (8x7x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.34 W/kg

## Configuration/Head/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.04 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 3.04 W/kg
**SAR(1 g) = 1.18 W/kg; SAR(10 g) = 0.572 W/kg**

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.56 W/kg




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

Date: 2016-5-27

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 UMTS Band V 4182CH Front Side 15mm with Battery 2-Second Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, HW-UMTS-FDD(WCDMA) (0); Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.4 MHz; $\sigma$ = 1.003 S/m; $\varepsilon_r$ = 55.638; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3168; ConvF(6.24, 6.24, 6.24); Calibrated: 2015-9-28;
- Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- DASY52 52.8.8(1222);

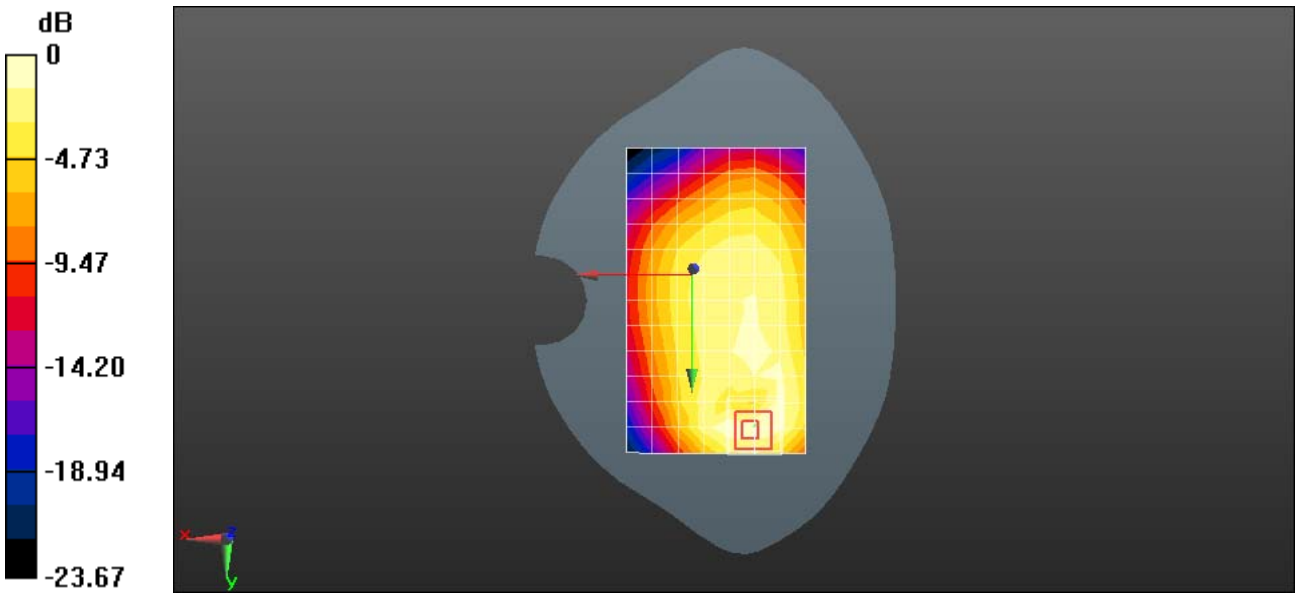
## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.215 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.03 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.284 W/kg
**SAR(1 g) = 0.176 W/kg; SAR(10 g) = 0.106 W/kg**

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.211 W/kg




0 dB = 0.215 W/kg = -6.68 dBW/kg

Date: 2016-5-27

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 UMTS Band V 4182CH Front Side 10mm with Battery 2-Second Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, HW-UMTS-FDD(WCDMA) (0); Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.4 MHz; $\sigma$ = 1.003 S/m; $\varepsilon_r$ = 55.638; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3168; ConvF(6.24, 6.24, 6.24); Calibrated: 2015-9-28;
- Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- DASY52 52.8.8(1222);

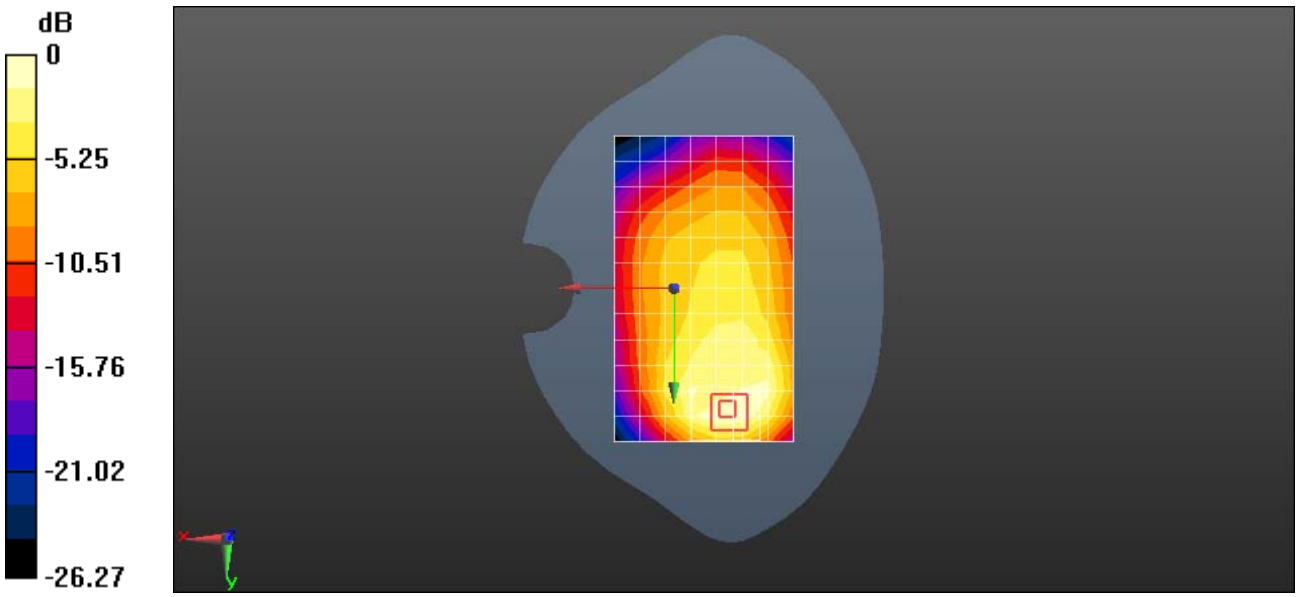
## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.364 W/kg

## Configuration/Body/Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.17 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.607 W/kg
**SAR(1 g) = 0.336 W/kg; SAR(10 g) = 0.186 W/kg**

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.389 W/kg




0 dB = 0.364 W/kg = -4.39 dBW/kg

Date: 2016-5-30

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band V 10M QPSK 1RB 25 offset 20450CH Right touch-Second Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 10MHz, QPSK/16-QAM) (0); Frequency: 829 MHz;Duty Cycle: 1:1
Medium parameters used: f = 829 MHz; $\sigma$ = 0.929 S/m; $\varepsilon_r$ = 42.523; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY Configuration:

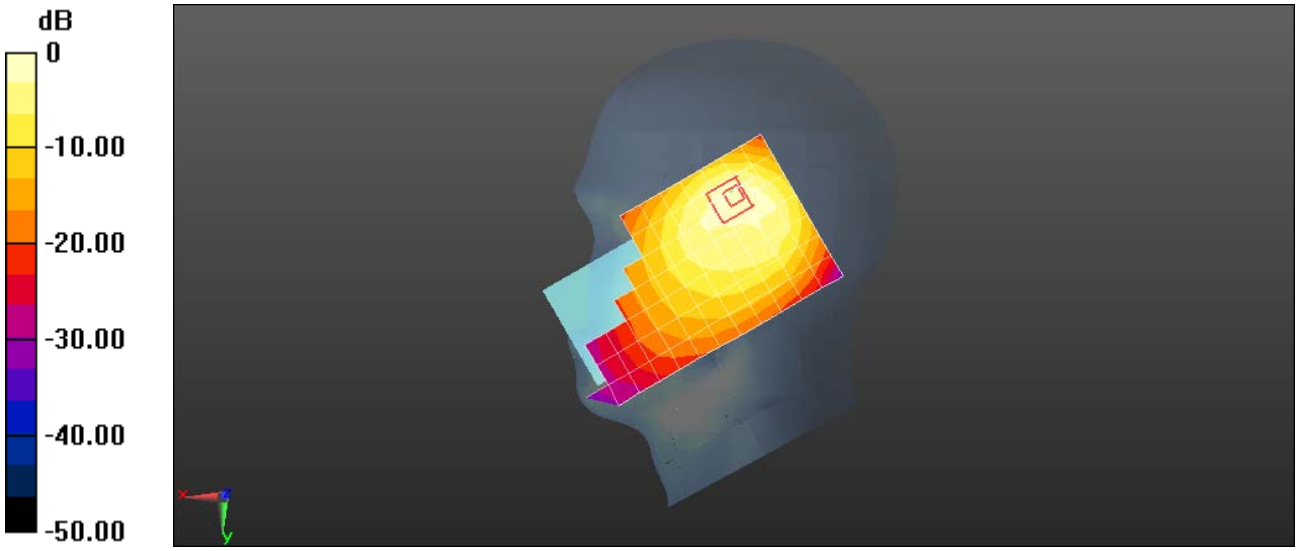
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.32, 6.32, 6.32); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

## Configuration/Head/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.31 W/kg

## Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 24.22 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 2.71 W/kg
**SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.541 W/kg**
Maximum value of SAR (measured) = 1.39 W/kg




0 dB = 1.31 W/kg = 1.17 dBW/kg

Date: 2016-5-26

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band V 10M QPSK 1RB 25 offset 20450CH Front Side 15mm with Battery 3-Second Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 10MHz, QPSK/16-QAM) (0); Frequency: 829 MHz;Duty Cycle: 1:1
Medium parameters used: f = 829 MHz; $\sigma$ = 0.999 S/m; $\varepsilon_r$ = 55.802; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

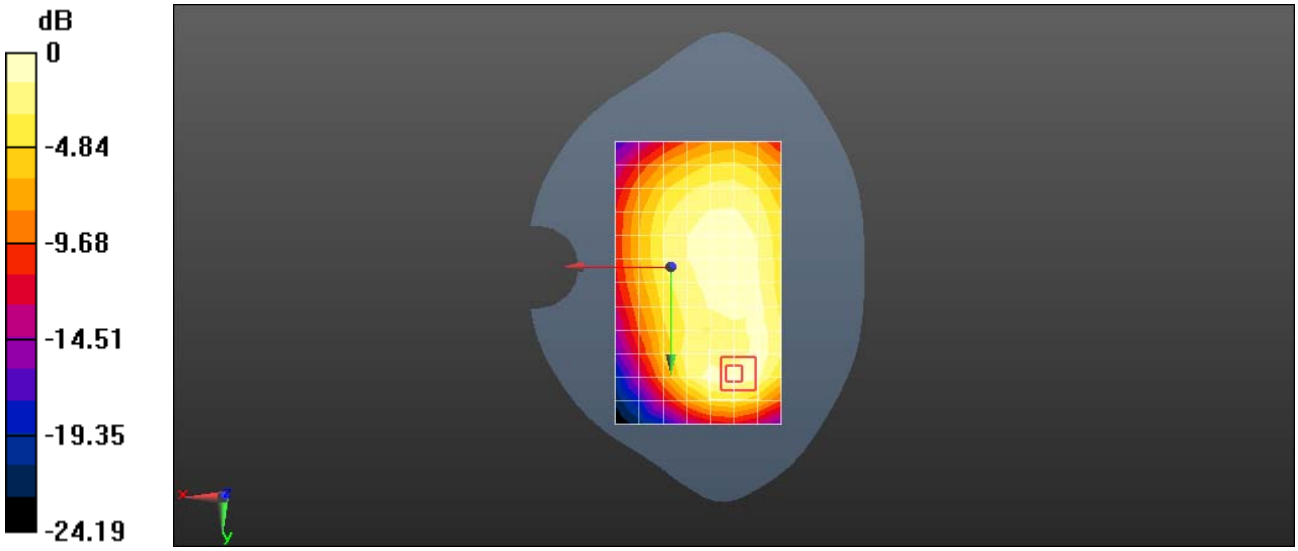
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.24, 6.24, 6.24); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.190 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.26 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.253 W/kg
**SAR(1 g) = 0.157 W/kg; SAR(10 g) = 0.095 W/kg**
Maximum value of SAR (measured) = 0.188 W/kg




0 dB = 0.190 W/kg = -7.21 dBW/kg

Date: 2016-5-26

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band V 10M QPSK 1RB 25 offset 20450CH Front Side 10mm with Battery 3-Second Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 10MHz, QPSK/16-QAM) (0); Frequency: 829 MHz;Duty Cycle: 1:1
Medium parameters used: f = 829 MHz; $\sigma$ = 0.999 S/m; $\varepsilon_r$ = 55.802; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

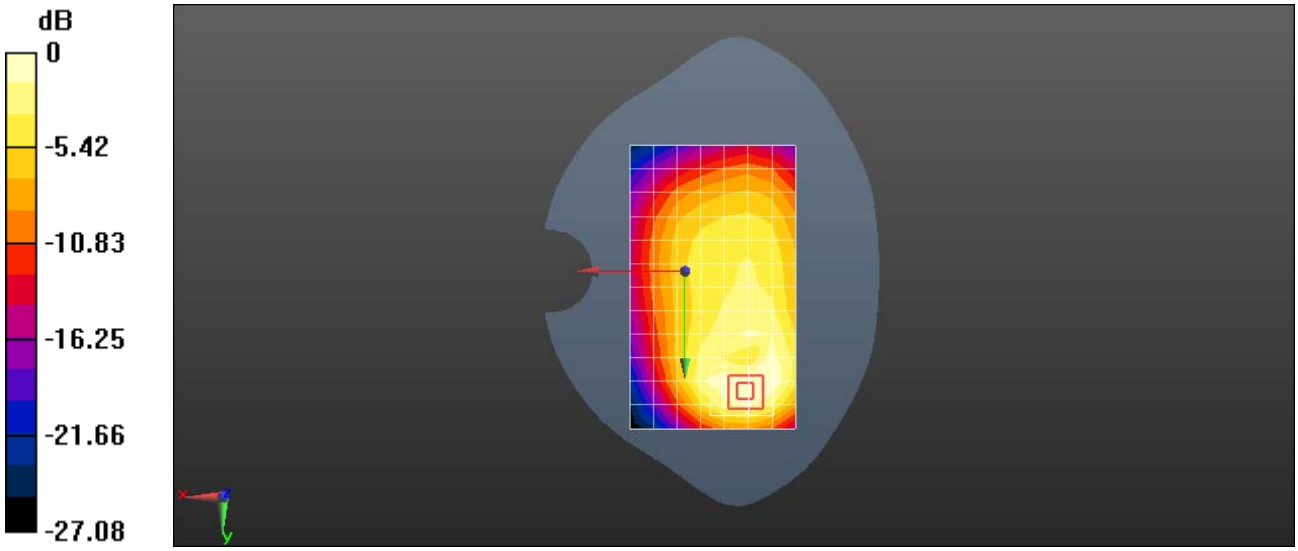
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.24, 6.24, 6.24); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.368 W/kg

## Configuration/Body/Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.42 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.593 W/kg
**SAR(1 g) = 0.336 W/kg; SAR(10 g) = 0.189 W/kg**
Maximum value of SAR (measured) = 0.414 W/kg




0 dB = 0.368 W/kg = -4.34 dBW/kg

Date: 2016-5-20

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band XII 10M QPSK 1RB 25 offset 23130CH Right touch-Second Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 10MHz, QPSK/16-QAM) (0); Frequency: 711 MHz;Duty Cycle: 1:1
Medium parameters used: f = 711 MHz; $\sigma$ = 0.866 S/m; $\varepsilon_r$ = 42.364; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY Configuration:

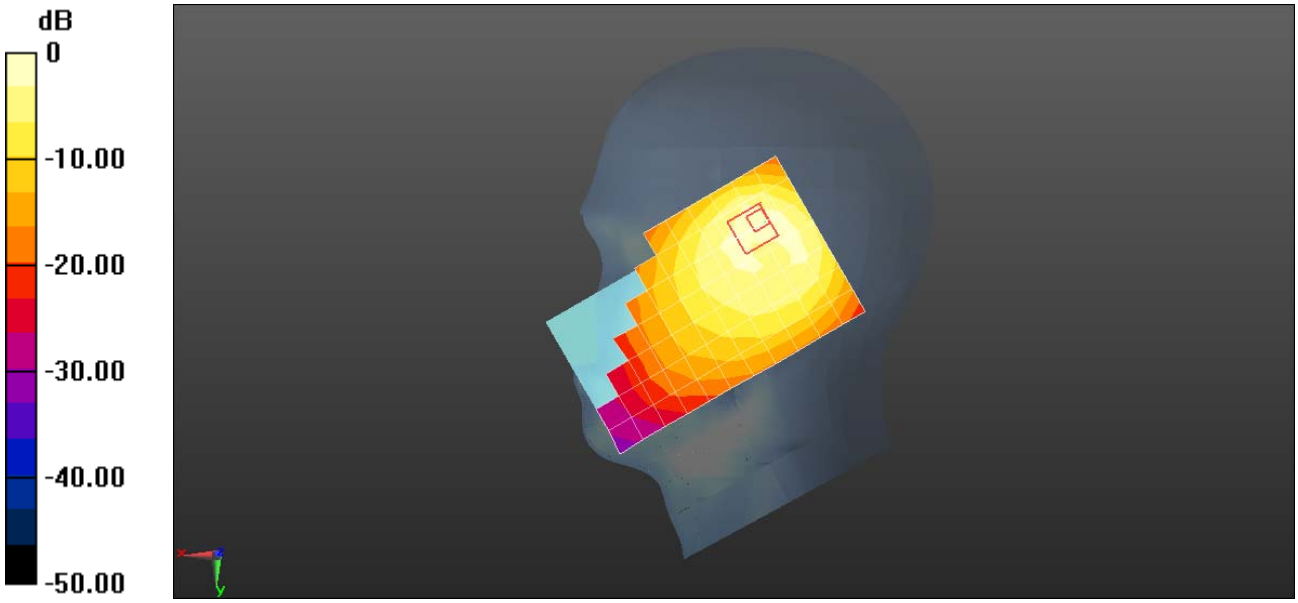
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.52, 6.52, 6.52); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

## Configuration/Head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.03 W/kg

## Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.14 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 2.44 W/kg
**SAR(1 g) = 0.916 W/kg; SAR(10 g) = 0.462 W/kg**
Maximum value of SAR (measured) = 1.12 W/kg




0 dB = 1.03 W/kg = 0.13 dBW/kg

Date: 2016-5-24

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band XII 10M QPSK 1RB 25 offset 23130CH Front Side 15mm-Second Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 10MHz, QPSK/16-QAM) (0); Frequency: 711 MHz;Duty Cycle: 1:1
Medium parameters used: f = 711 MHz; $\sigma$ = 0.939 S/m; $\varepsilon_r$ = 55.224; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

- ¿ Probe: ES3DV3 - SN3168; ConvF(6.39, 6.39, 6.39); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM2; Type: SAM; Serial: TP:1474
- ¿ DASY52 52.8.8(1222);

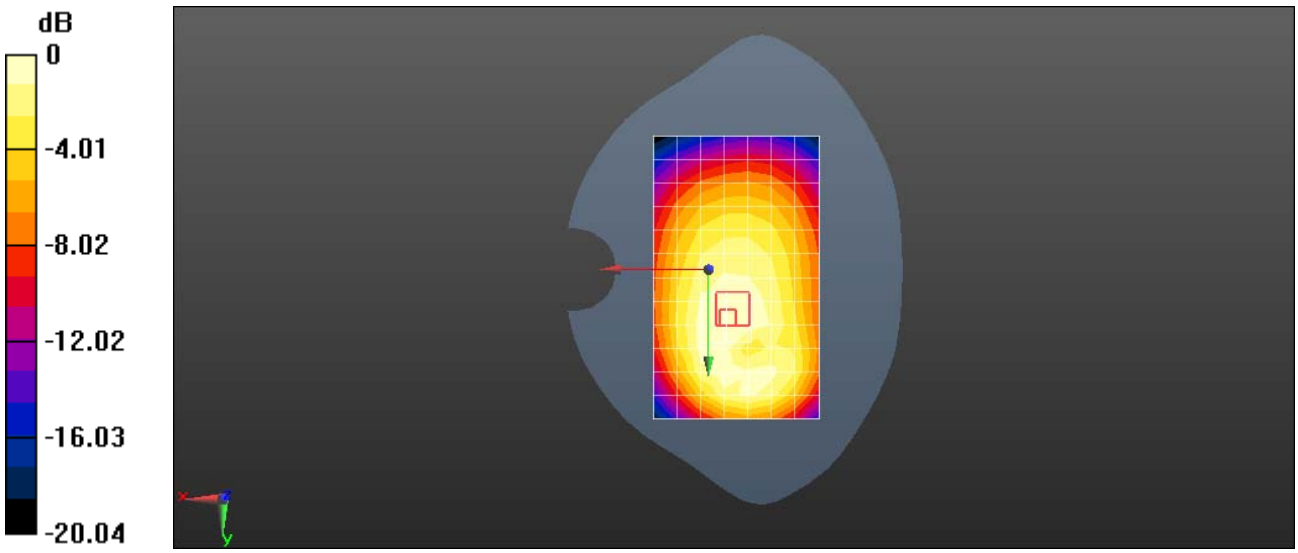
## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.253 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.47 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.308 W/kg
**SAR(1 g) = 0.225 W/kg; SAR(10 g) = 0.165 W/kg**

Maximum value of SAR (measured) = 0.252 W/kg




0 dB = 0.253 W/kg = -5.97 dBW/kg

Date: 2016-5-24

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band XII 10M QPSK 1RB 25 offset 23130CH Front Side 10mm-Second Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 10MHz, QPSK/16-QAM) (0); Frequency: 711 MHz;Duty Cycle: 1:1
Medium parameters used: f = 711 MHz; $\sigma$ = 0.939 S/m; $\varepsilon_r$ = 55.224; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

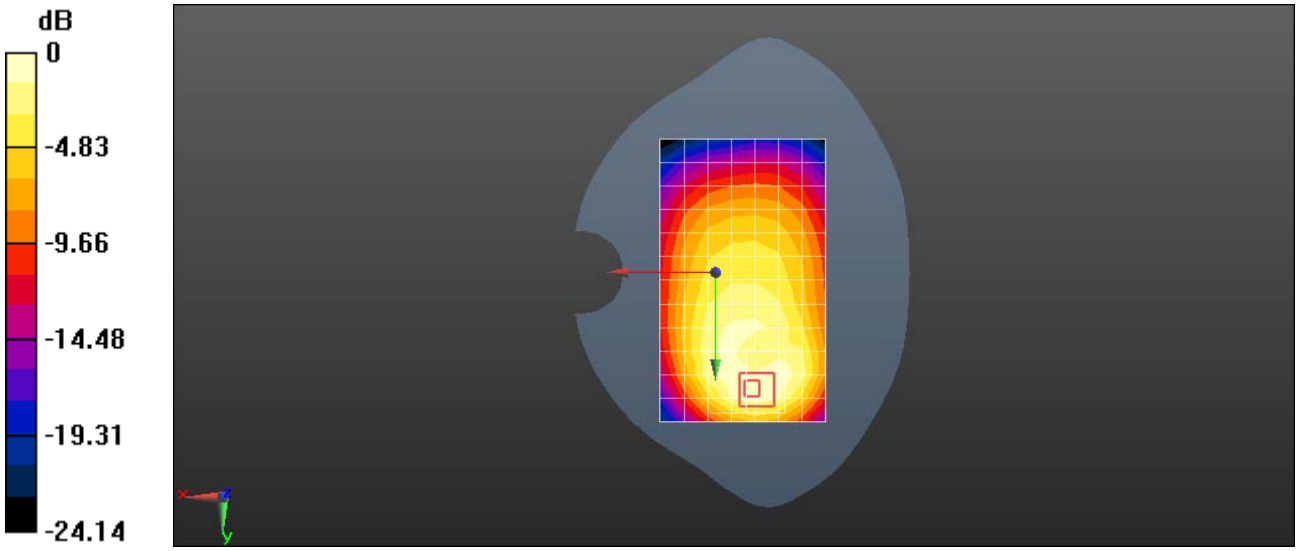
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.39, 6.39, 6.39); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM2; Type: SAM; Serial: TP:1474
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.446 W/kg

## Configuration/Body/Zoom Scan (7x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.99 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.713 W/kg
**SAR(1 g) = 0.407 W/kg; SAR(10 g) = 0.234 W/kg**
Maximum value of SAR (measured) = 0.501 W/kg




0 dB = 0.446 W/kg = -3.51 dBW/kg

Date: 2016-5-19

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band XVII 10M QPSK 25RB 13 offset 23800CH Right touch-Second Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 10MHz, QPSK/16-QAM) (0); Frequency: 711 MHz;Duty Cycle: 1:1
Medium parameters used: f = 711 MHz; $\sigma$ = 0.866 S/m; $\varepsilon_r$ = 42.364; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY Configuration:

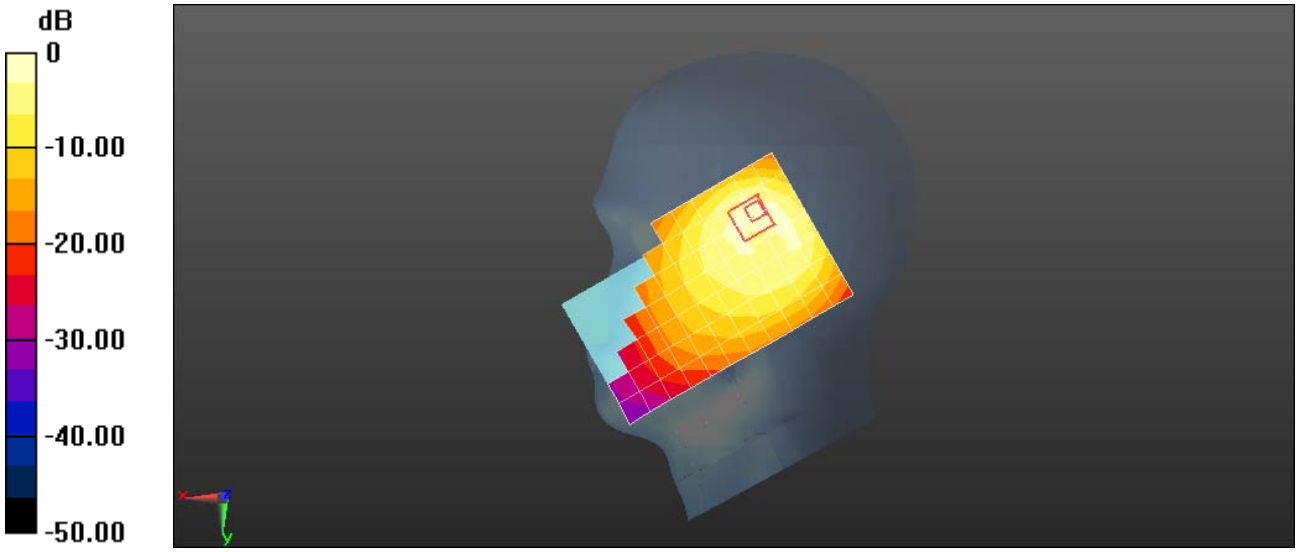
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.52, 6.52, 6.52); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

## Configuration/Head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.37 W/kg

## Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.78 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 3.11 W/kg
**SAR(1 g) = 1.17 W/kg; SAR(10 g) = 0.589 W/kg**




0 dB = 1.37 W/kg = 1.37 dBW/kg

Date: 2016-5-25

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band XVII 10M QPSK 25RB 13 offset 23800CH Front Side 15mm with Battery 3-Second Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 10MHz, QPSK/16-QAM) (0); Frequency: 711 MHz;Duty Cycle: 1:1
Medium parameters used: f = 711 MHz; $\sigma$ = 0.939 S/m; $\varepsilon_r$ = 55.224; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

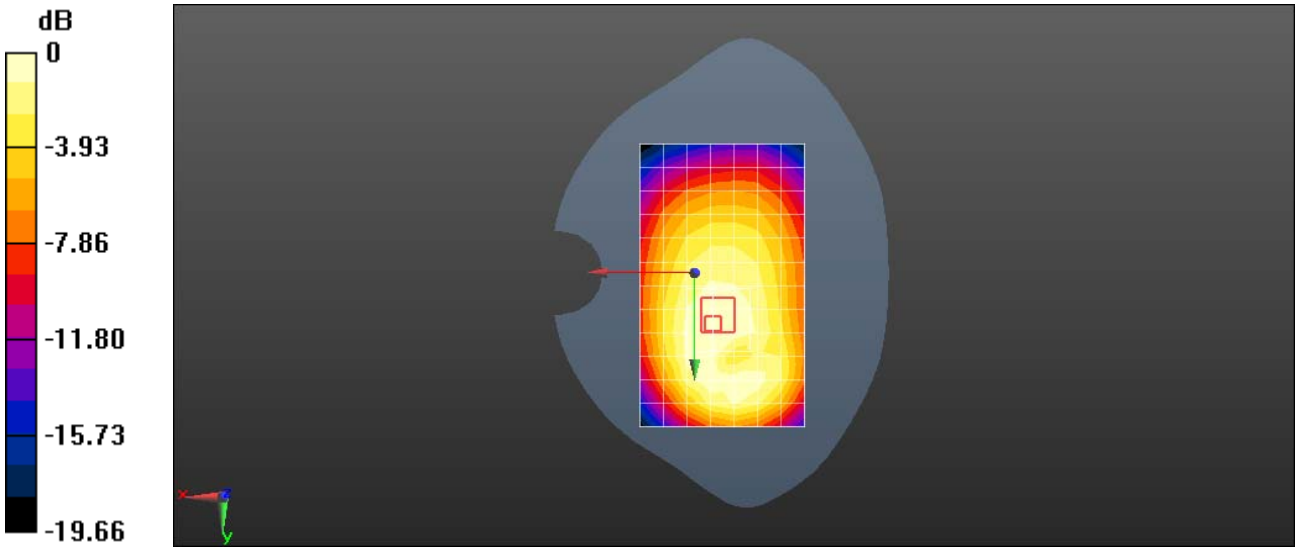
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.39, 6.39, 6.39); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM2; Type: SAM; Serial: TP:1474
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.253 W/kg

## Configuration/Body/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.71 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 0.339 W/kg
**SAR(1 g) = 0.244 W/kg; SAR(10 g) = 0.178 W/kg**
Maximum value of SAR (measured) = 0.274 W/kg




0 dB = 0.253 W/kg = -5.97 dBW/kg

Date: 2016-5-25

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band XVII 10M QPSK 25RB 13 offset 23800CH Front Side 10mm with Battery 3-Second Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 10MHz, QPSK/16-QAM) (0); Frequency: 711 MHz;Duty Cycle: 1:1
Medium parameters used: f = 711 MHz; $\sigma$ = 0.939 S/m; $\varepsilon_r$ = 55.224; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

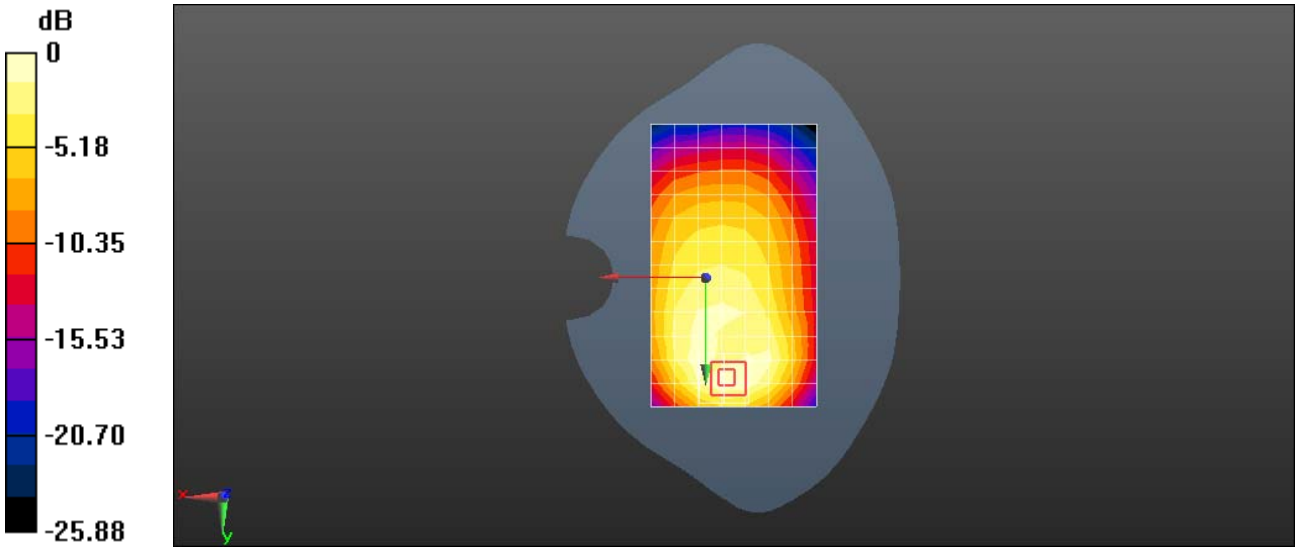
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.39, 6.39, 6.39); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM2; Type: SAM; Serial: TP:1474
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.461 W/kg

## Configuration/Body/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.64 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.653 W/kg
**SAR(1 g) = 0.370 W/kg; SAR(10 g) = 0.211 W/kg**
Maximum value of SAR (measured) = 0.457 W/kg




0 dB = 0.461 W/kg = -3.36 dBW/kg

Date: 2016-5-19

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 GSM850 190CH Right touch-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, HW-GSM\GPRS\EGPRS-1TS (0); Frequency: 836.6 MHz;Duty Cycle: 1:8.30042
Medium parameters used: f = 837 MHz; $\sigma$ = 0.916 S/m; $\varepsilon_r$ = 40.646; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY Configuration:

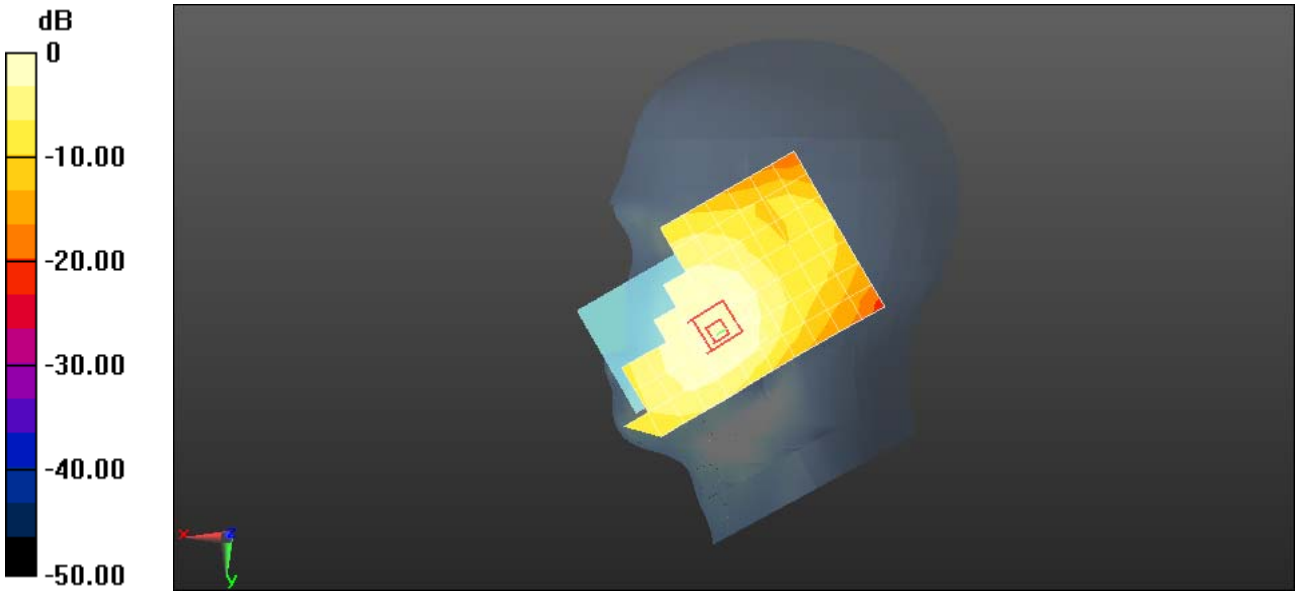
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.32, 6.32, 6.32); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM2; Type: SAM; Serial: TP:1474
- ¿ DASY52 52.8.8(1222);

## Configuration/Head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.240 W/kg

## Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.789 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.287 W/kg
**SAR(1 g) = 0.227 W/kg; SAR(10 g) = 0.174 W/kg**
Maximum value of SAR (measured) = 0.251 W/kg




0 dB = 0.240 W/kg = -6.20 dBW/kg

Date: 2016-5-27

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 GSM850 190CH Back Side 15mm with Battery 3-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, HW-GSM\GPRS\EGPRS-1TS (0); Frequency: 836.6 MHz;Duty Cycle: 1:8.30042
Medium parameters used: f = 837 MHz; $\sigma$ = 1.006 S/m; $\varepsilon_r$ = 55.675; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

- ¿ Probe: ES3DV3 - SN3168; ConvF(6.24, 6.24, 6.24); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

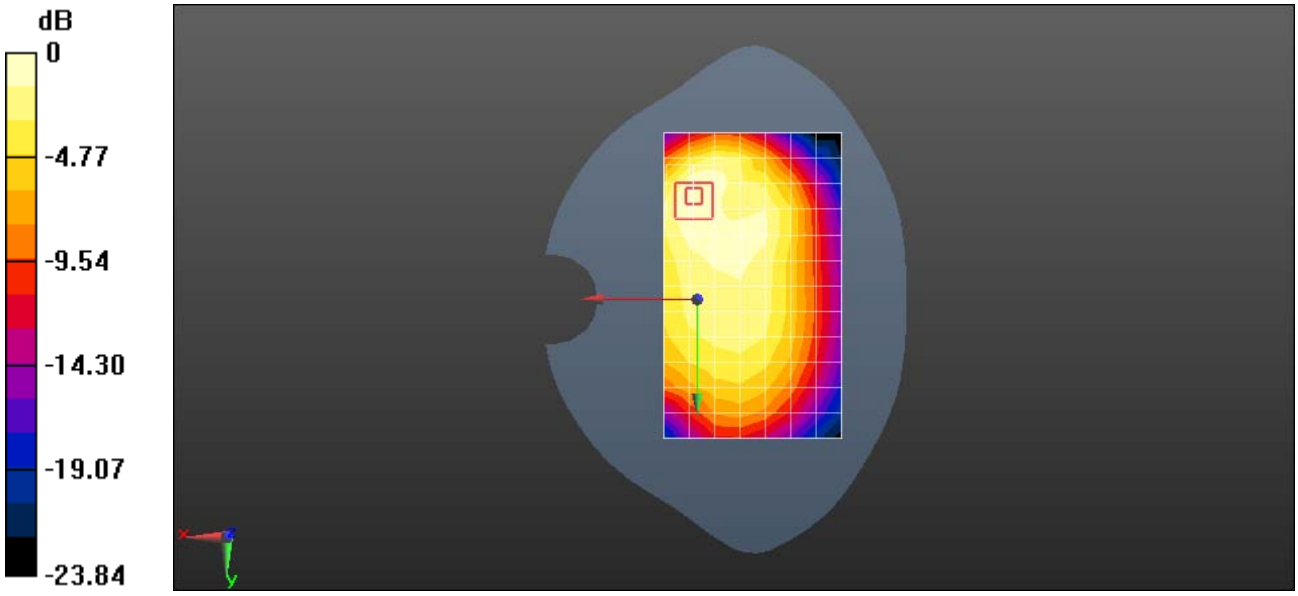
## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.394 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.60 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.589 W/kg
**SAR(1 g) = 0.350 W/kg; SAR(10 g) = 0.210 W/kg**

Maximum value of SAR (measured) = 0.424 W/kg




0 dB = 0.394 W/kg = -4.05 dBW/kg

Date: 2016-5-27

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 GSM850 GPRS 2TS 190CH Back Side 10mm with Battery 3-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, HW-GSM\GPRS\EGPRS-2TS (0); Frequency: 836.6 MHz;Duty Cycle: 1:4.10015
Medium parameters used: f = 837 MHz; $\sigma$ = 1.006 S/m; $\varepsilon_r$ = 55.675; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

- ¿ Probe: ES3DV3 - SN3168; ConvF(6.24, 6.24, 6.24); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

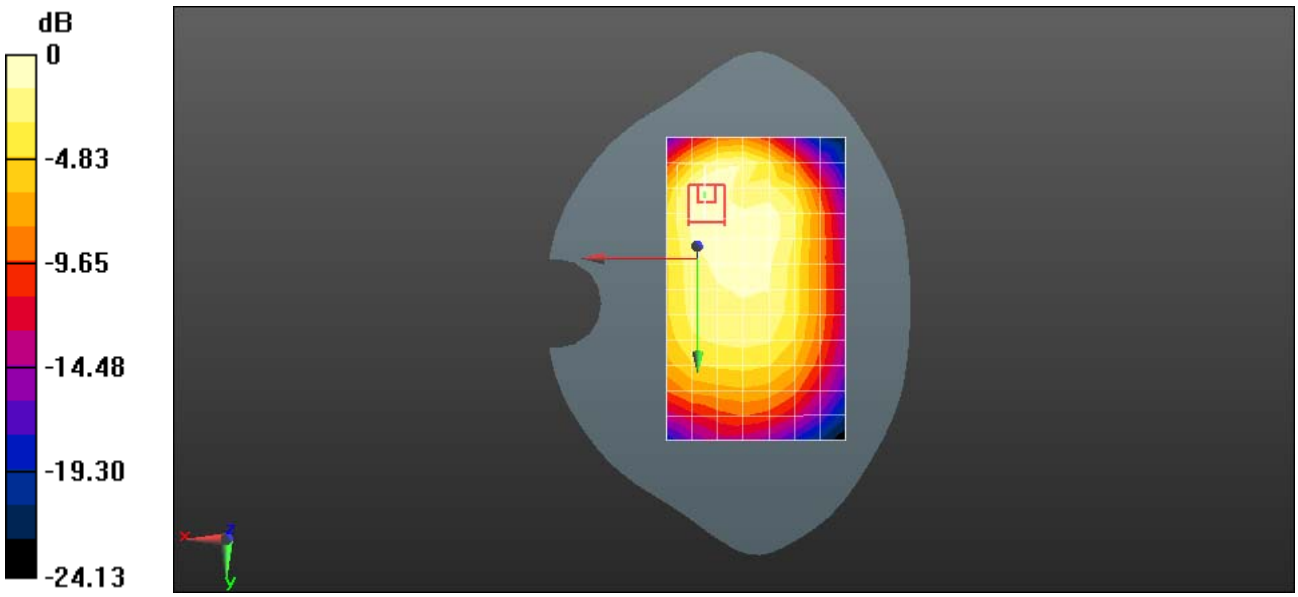
## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.484 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.90 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 0.740 W/kg
**SAR(1 g) = 0.429 W/kg; SAR(10 g) = 0.262 W/kg**

Maximum value of SAR (measured) = 0.522 W/kg




0 dB = 0.484 W/kg = -3.15 dBW/kg

Date: 2016-5-20

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 GSM1900 810CH Left touch-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR2**

Communication System: UID 0, HW-GSM\GPRS\EGPRS-1TS (0); Frequency: 1909.8 MHz;Duty Cycle: 1:8.30042
Medium parameters used: f = 1910 MHz; $\sigma$ = 1.416 S/m; $\varepsilon_r$ = 39.515; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY Configuration:

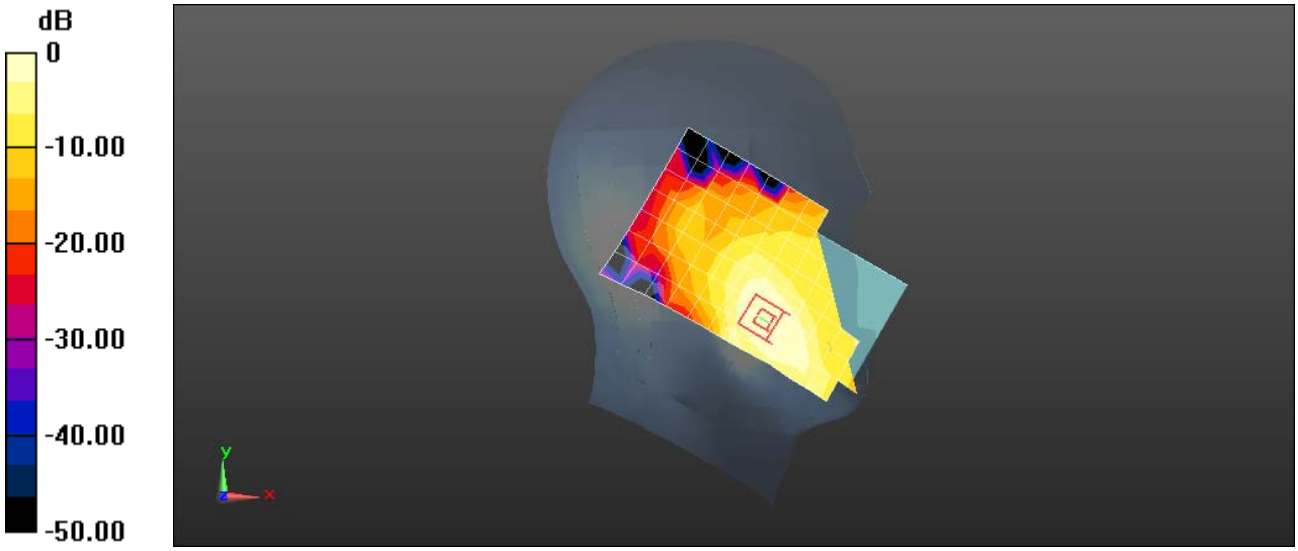
- ¿ Probe: EX3DV4 - SN3744; ConvF(7.54, 7.54, 7.54); Calibrated: 2015-7-24;
- ¿ Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- ¿ Electronics: DAE4 Sn1236; Calibrated: 2015-11-23
- ¿ Phantom: SAM3; Type: SAM; Serial: TP-1597
- ¿ DASY52 52.8.8(1222);

## Configuration/Head/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.184 W/kg

## Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.179 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.258 W/kg
**SAR(1 g) = 0.160 W/kg; SAR(10 g) = 0.098 W/kg**
Maximum value of SAR (measured) = 0.222 W/kg




0 dB = 0.184 W/kg = -7.35 dBW/kg

Date: 2016-5-21

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 GSM1900 661CH Front side 15mm with Battery 2-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR2**

Communication System: UID 0, HW-GSM\GPRS\EGPRS-1TS (0); Frequency: 1880 MHz;Duty Cycle: 1:8.30042
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.483 S/m; $\varepsilon_r$ = 52.016; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

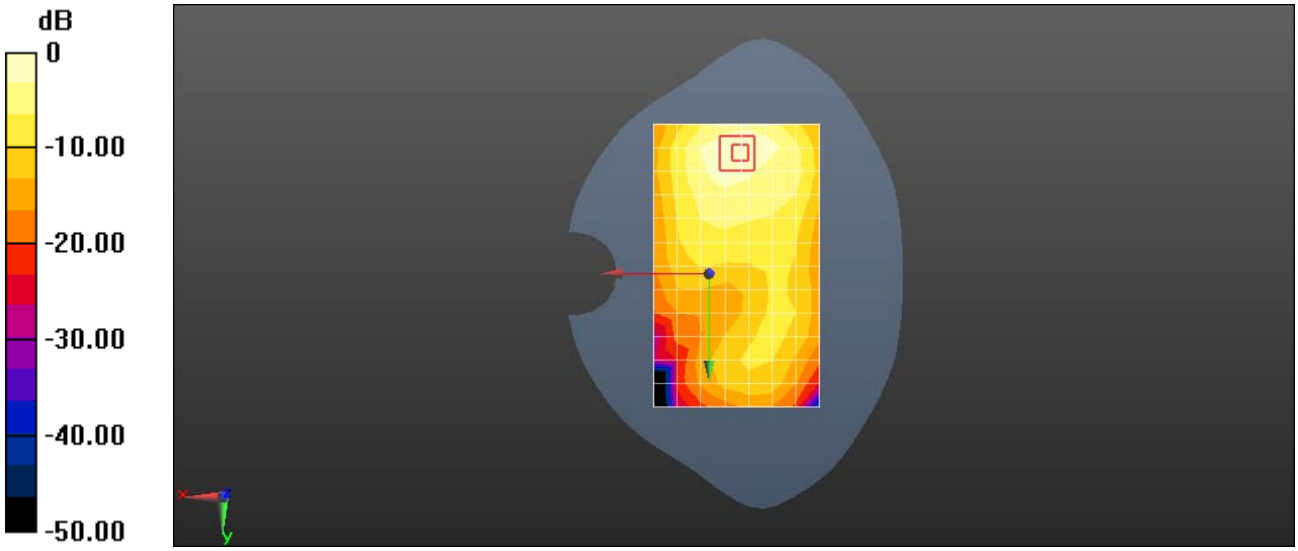
- ¿ Probe: EX3DV4 - SN3744; ConvF(7.24, 7.24, 7.24); Calibrated: 2015-7-24;
- ¿ Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- ¿ Electronics: DAE4 Sn1236; Calibrated: 2015-11-23
- ¿ Phantom: SAM3; Type: SAM; Serial: TP-1597
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.569 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.751 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.702 W/kg
**SAR(1 g) = 0.440 W/kg; SAR(10 g) = 0.258 W/kg**
Maximum value of SAR (measured) = 0.610 W/kg




0 dB = 0.569 W/kg = -2.45 dBW/kg

Date: 2016-5-21

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 GSM1900 GPRS 2TS 661CH Bottom side 10mm with Battery 2-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR2**

Communication System: UID 0, HW-GSM\GPRS\EGPRS-2TS (0); Frequency: 1880 MHz;Duty Cycle: 1:4.10015
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.483 S/m; $\varepsilon_r$ = 52.016; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

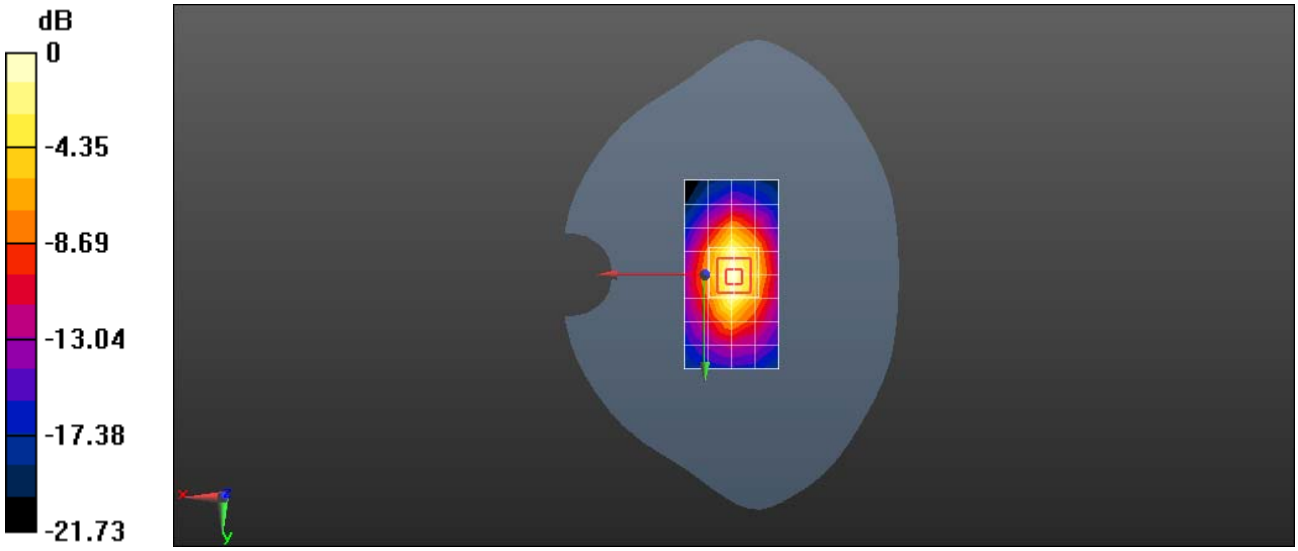
- ¿ Probe: EX3DV4 - SN3744; ConvF(7.24, 7.24, 7.24); Calibrated: 2015-7-24;
- ¿ Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- ¿ Electronics: DAE4 Sn1236; Calibrated: 2015-11-23
- ¿ Phantom: SAM3; Type: SAM; Serial: TP-1597
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.49 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 28.90 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.77 W/kg
**SAR(1 g) = 1.04 W/kg; SAR(10 g) = 0.568 W/kg**
Maximum value of SAR (measured) = 1.50 W/kg




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

Date: 2016-5-19

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 UMTS Band II 9262CH Left touch with Battery 3-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR2**

Communication System: UID 0, HW-UMTS-FDD(WCDMA) (0); Frequency: 1852.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1852.4 MHz; $\sigma$ = 1.357 S/m; $\varepsilon_r$ = 39.756; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3744; ConvF(7.54, 7.54, 7.54); Calibrated: 2015-7-24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1236; Calibrated: 2015-11-23
- Phantom: SAM3; Type: SAM; Serial: TP-1597
- DASY52 52.8.8(1222);

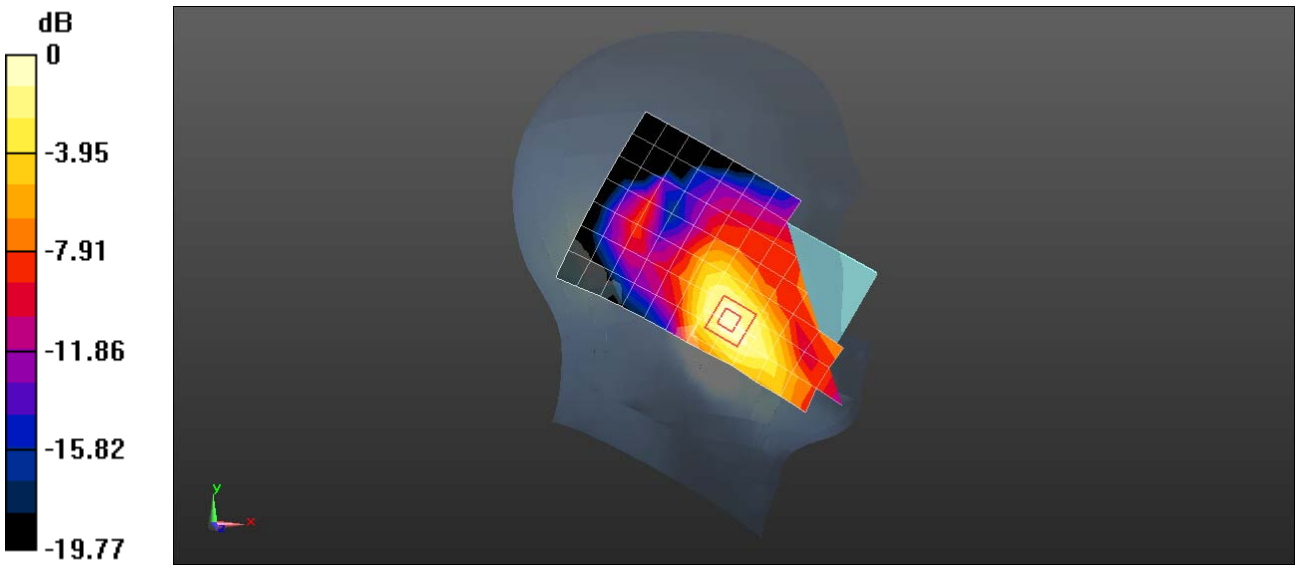
## Configuration/Head/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.414 W/kg

## Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.271 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.603 W/kg
**SAR(1 g) = 0.365 W/kg; SAR(10 g) = 0.227 W/kg**

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.515 W/kg




0 dB = 0.515 W/kg = -2.88 dBW/kg

Date: 2016-5-21

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 UMTS Band II 9538CH Back side 15mm with Battery 3-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR2**

Communication System: UID 0, HW-UMTS-FDD(WCDMA) (0); Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1908 MHz; $\sigma$ = 1.507 S/m; $\varepsilon_r$ = 51.891; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

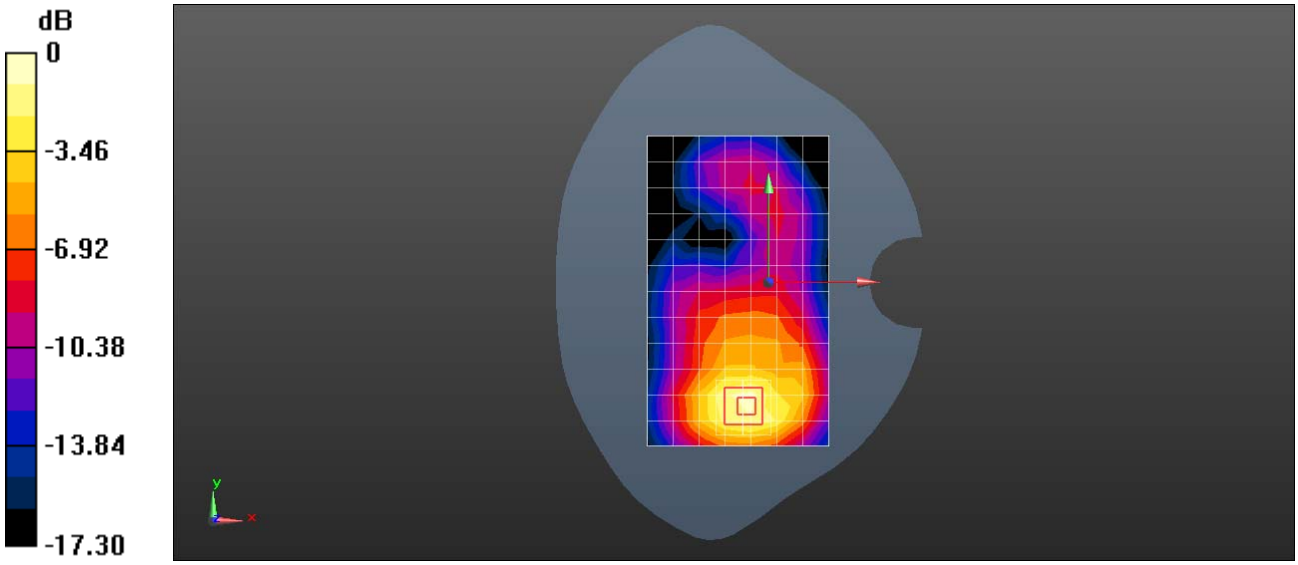
- ¿ Probe: EX3DV4 - SN3744; ConvF(7.24, 7.24, 7.24); Calibrated: 2015-7-24;
- ¿ Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- ¿ Electronics: DAE4 Sn1236; Calibrated: 2015-11-23
- ¿ Phantom: SAM3; Type: SAM; Serial: TP-1597
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.927 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.155 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.27 W/kg
**SAR(1 g) = 0.797 W/kg; SAR(10 g) = 0.473 W/kg**
Maximum value of SAR (measured) = 1.09 W/kg




0 dB = 1.09 W/kg = 0.39 dBW/kg

Date: 2016-5-21

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 UMTS Band II 9400CH Bottom side 10mm with Battery 2-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR2**

Communication System: UID 0, HW-UMTS-FDD(WCDMA) (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.483 S/m; $\varepsilon_r$ = 52.016; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

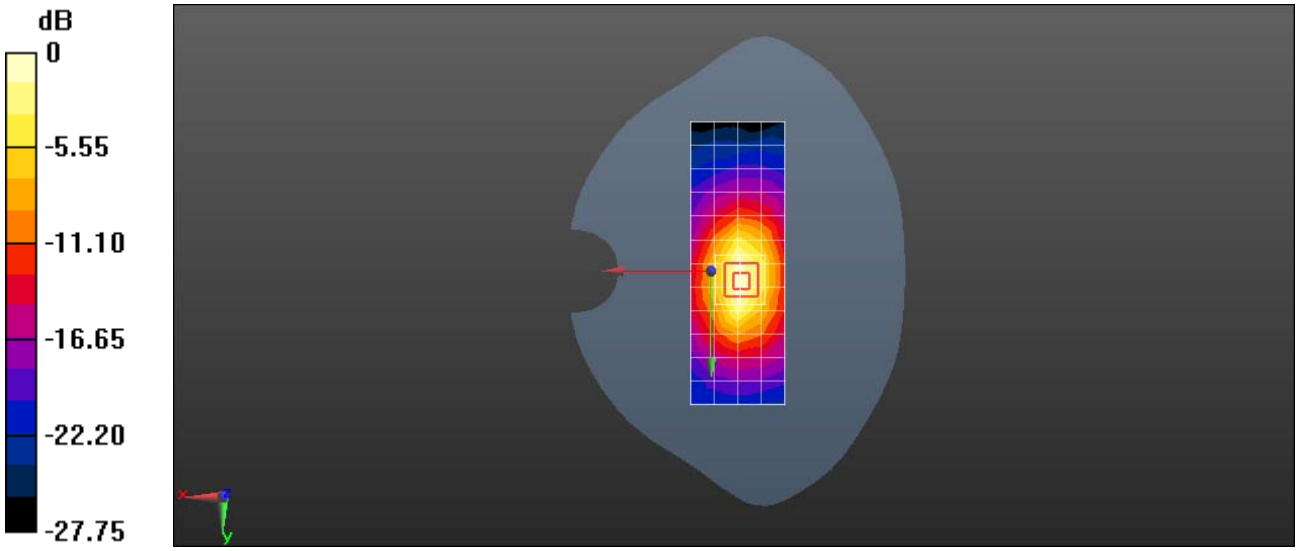
- Probe: EX3DV4 - SN3744; ConvF(7.24, 7.24, 7.24); Calibrated: 2015-7-24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -9.0, 31.0
- Electronics: DAE4 Sn1236; Calibrated: 2015-11-23
- Phantom: SAM3; Type: SAM; Serial: TP-1597
- DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (5x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.01 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 23.18 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.25 W/kg
**SAR(1 g) = 0.724 W/kg; SAR(10 g) = 0.387 W/kg**
Maximum value of SAR (measured) = 1.06 W/kg




0 dB = 1.01 W/kg = 0.04 dBW/kg

Date: 2016-5-18

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 UMTS Band IV 1312CH Left touch with Battery 2-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR2**

Communication System: UID 0, HW-UMTS-FDD(WCDMA) (0); Frequency: 1712.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1712.4 MHz; $\sigma$ = 1.332 S/m; $\varepsilon_r$ = 40.619; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY Configuration:

- ¿ Probe: EX3DV4 - SN3744; ConvF(7.84, 7.84, 7.84); Calibrated: 2015-7-24;
- ¿ Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- ¿ Electronics: DAE4 Sn1236; Calibrated: 2015-11-23
- ¿ Phantom: SAM4; Type: SAM; Serial: TP-1620
- ¿ DASY52 52.8.8(1222);

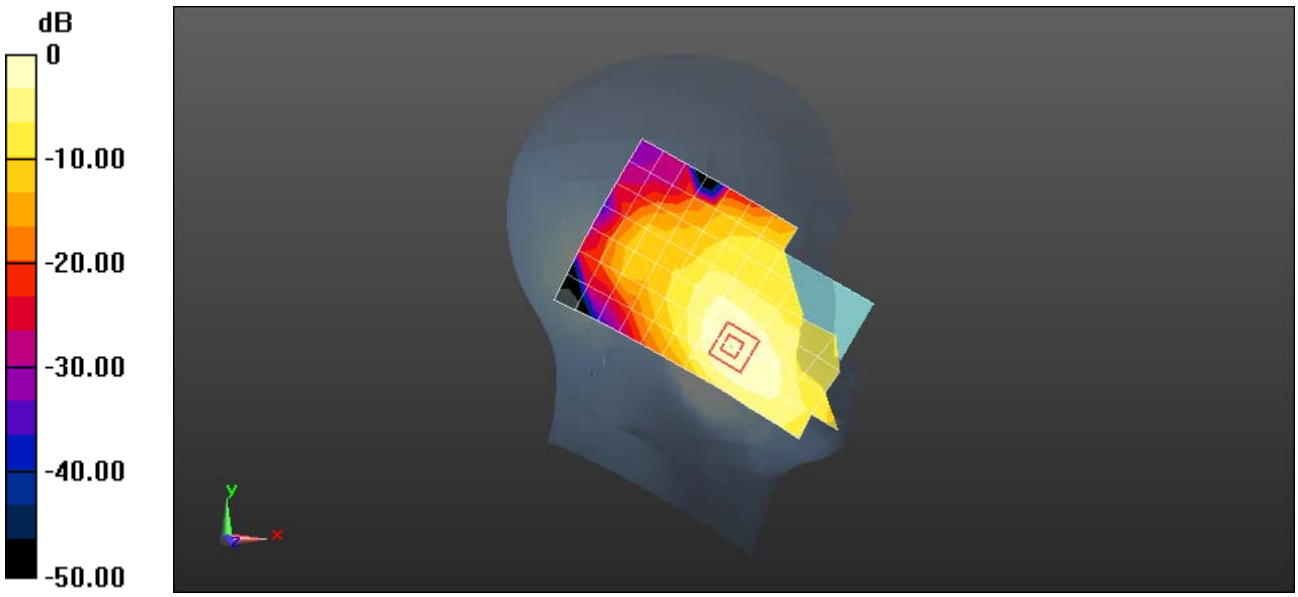
## Configuration/Head/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.432 W/kg

## Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.254 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.529 W/kg
**SAR(1 g) = 0.350 W/kg; SAR(10 g) = 0.225 W/kg**

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.468 W/kg




0 dB = 0.432 W/kg = -3.65 dBW/kg

Date: 2016-6-2

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 UMTS Band IV 14312CH Back Side 15mm with Battery 3-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, HW-UMTS-FDD(WCDMA) (0); Frequency: 1712.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1712.4 MHz; $\sigma$ = 1.445 S/m; $\varepsilon_r$ = 51.946; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3168; ConvF(4.95, 4.95, 4.95); Calibrated: 2015-9-28;
- Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- DASY52 52.8.8(1222);

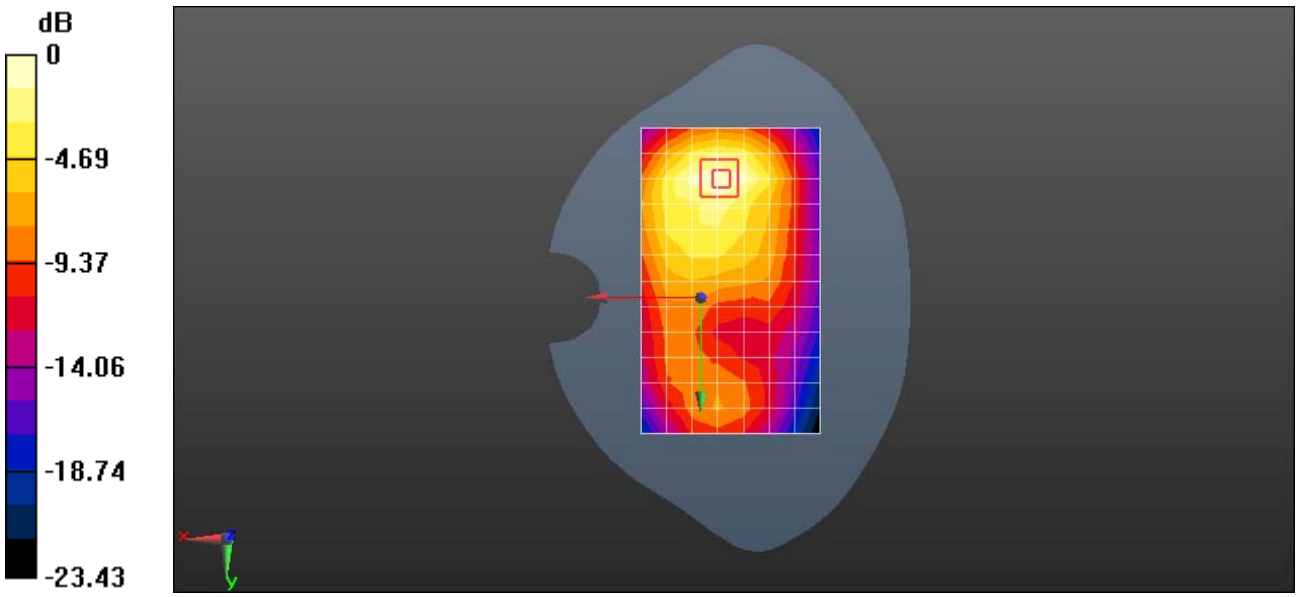
## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.859 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.846 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.11 W/kg
**SAR(1 g) = 0.724 W/kg; SAR(10 g) = 0.441 W/kg**

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.854 W/kg




0 dB = 0.859 W/kg = -0.66 dBW/kg

Date: 2016-6-2

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 UMTS Band IV 1312CH Bottom Side 10mm with Battery 3-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, HW-UMTS-FDD(WCDMA) (0); Frequency: 1712.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1712.4 MHz; $\sigma$ = 1.445 S/m; $\varepsilon_r$ = 51.946; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3168; ConvF(4.95, 4.95, 4.95); Calibrated: 2015-9-28;
- Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- DASY52 52.8.8(1222);

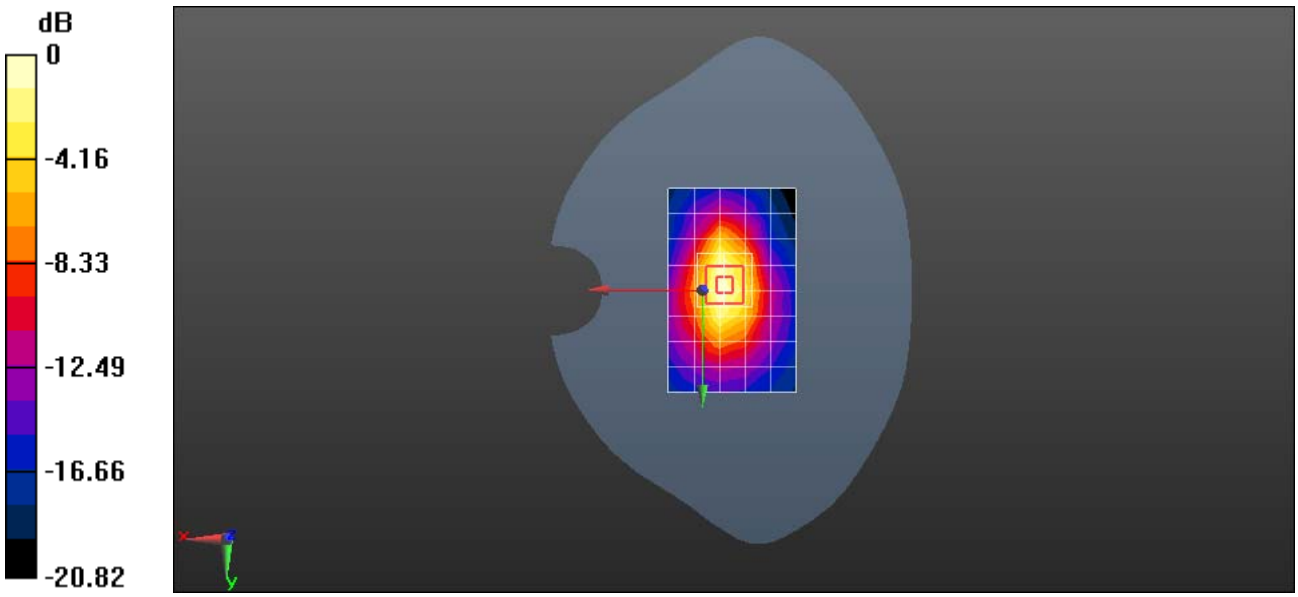
## Configuration/Body/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.964 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.47 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 1.42 W/kg
**SAR(1 g) = 0.850 W/kg; SAR(10 g) = 0.465 W/kg**

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




0 dB = 0.964 W/kg = -0.16 dBW/kg

Date: 2016-5-19

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 UMTS Band V 4132CH Right touch with Battery2-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, HW-UMTS-FDD(WCDMA) (0); Frequency: 826.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 826.4 MHz; $\sigma$ = 0.908 S/m; $\varepsilon_r$ = 40.722; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY Configuration:

- ¿ Probe: ES3DV3 - SN3168; ConvF(6.32, 6.32, 6.32); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM2; Type: SAM; Serial: TP:1474
- ¿ DASY52 52.8.8(1222);

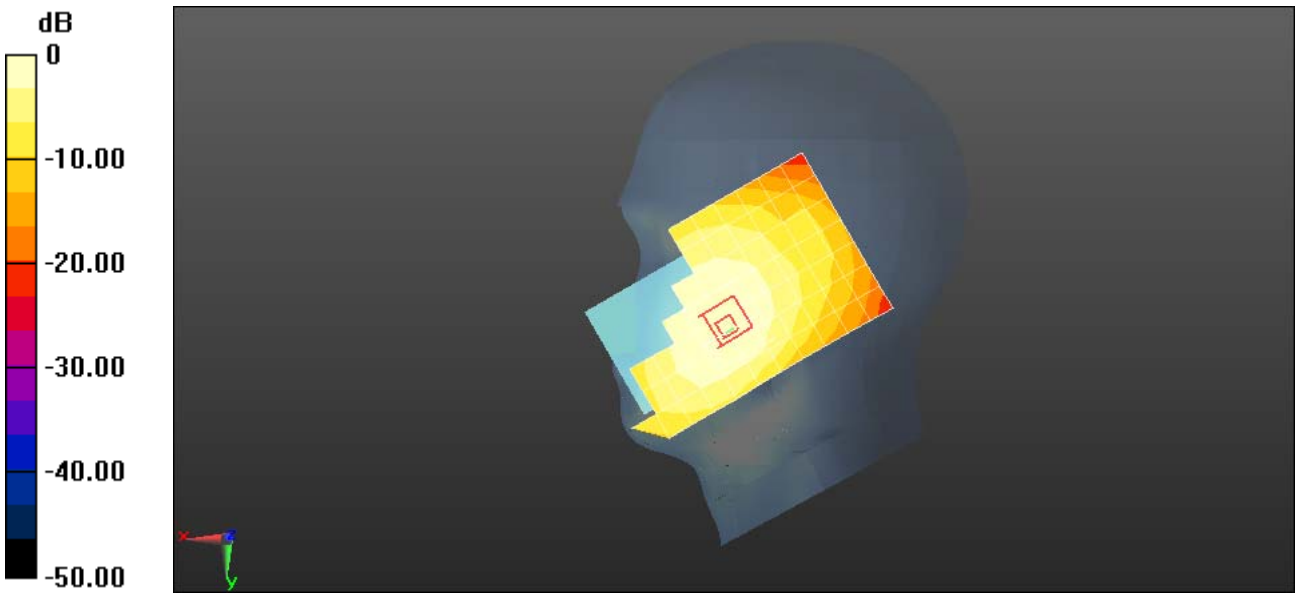
## Configuration/Head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.293 W/kg

## Configuration/Head/Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.953 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 0.344 W/kg
**SAR(1 g) = 0.274 W/kg; SAR(10 g) = 0.211 W/kg**

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.299 W/kg




0 dB = 0.293 W/kg = -5.33 dBW/kg

Date: 2016-5-26

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 UMTS Band V 4182CH Back Side 15mm with Battery 3-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, HW-UMTS-FDD(WCDMA) (0); Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.4 MHz; $\sigma$ = 1.003 S/m; $\varepsilon_r$ = 55.638; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3168; ConvF(6.24, 6.24, 6.24); Calibrated: 2015-9-28;
- Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- DASY52 52.8.8(1222);

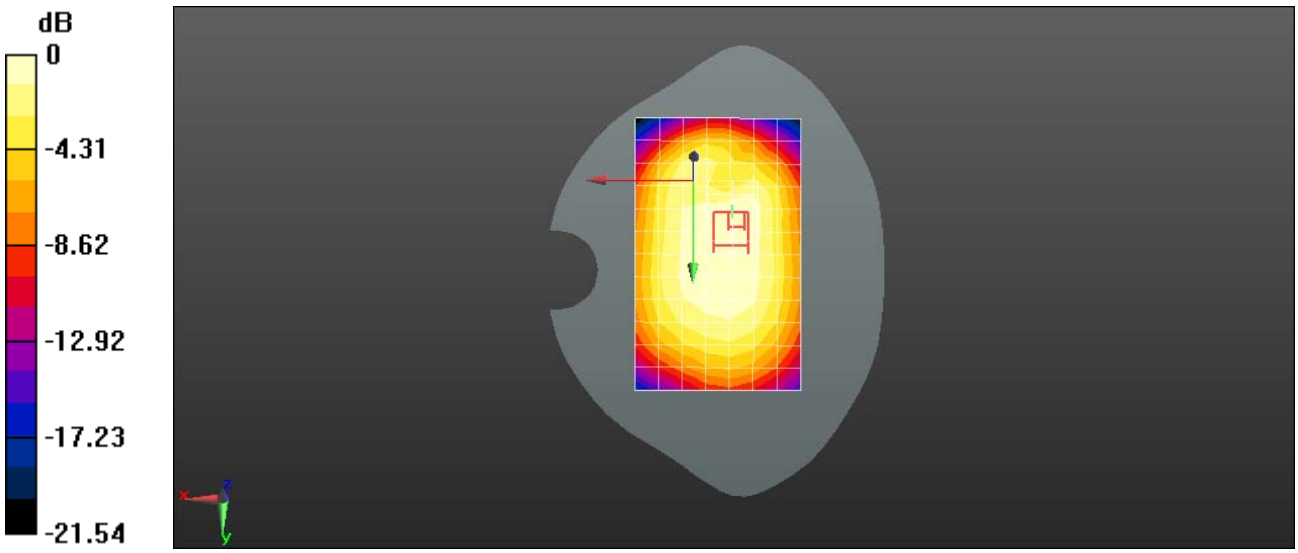
## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.338 W/kg

## Configuration/Body/Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.85 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.396 W/kg
**SAR(1 g) = 0.308 W/kg; SAR(10 g) = 0.233 W/kg**

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.337 W/kg




0 dB = 0.338 W/kg = -4.71 dBW/kg

Date: 2016-5-26

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 UMTS Band V 4182CH Back Side 10mm with Battery 2-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, HW-UMTS-FDD(WCDMA) (0); Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.4 MHz; $\sigma$ = 1.003 S/m; $\varepsilon_r$ = 55.638; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3168; ConvF(6.24, 6.24, 6.24); Calibrated: 2015-9-28;
- Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- DASY52 52.8.8(1222);

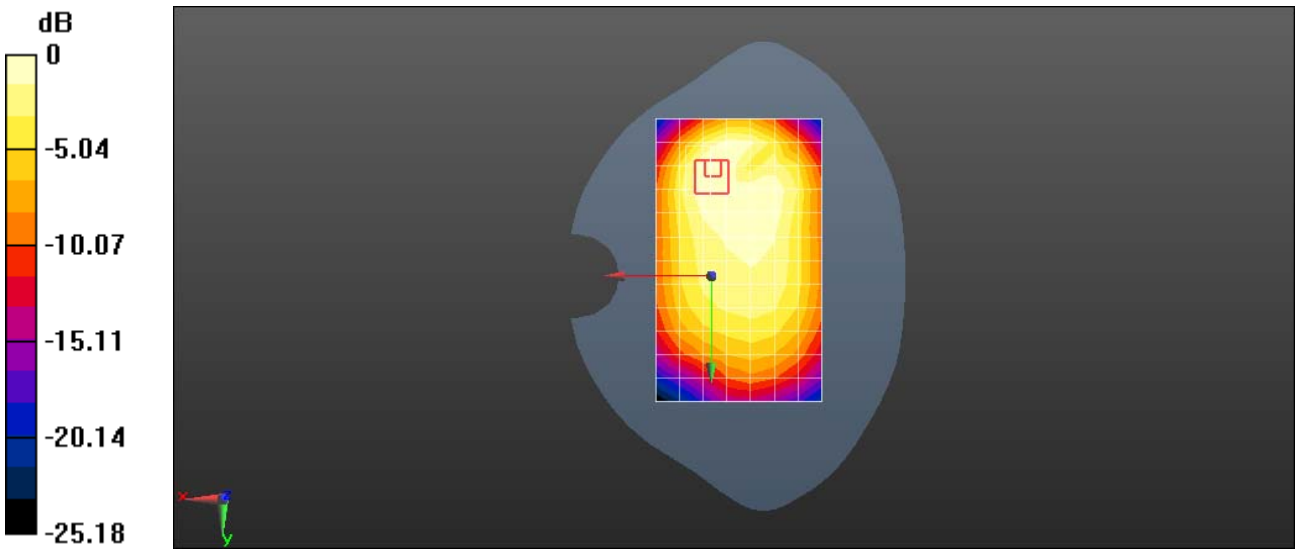
## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.475 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.15 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.799 W/kg
**SAR(1 g) = 0.462 W/kg; SAR(10 g) = 0.276 W/kg**

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.565 W/kg




0 dB = 0.475 W/kg = -3.23 dBW/kg

Date: 2016-5-20

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band II 20M QPSK 1RB 99 offset 18900CH Left touch with Battery 3-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR2**

Communication System: UID 0, LTE-FDD (SC-FDMA, 20MHz, QPSK/16-QAM) (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.385 S/m; $\varepsilon_r$ = 39.649; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY Configuration:

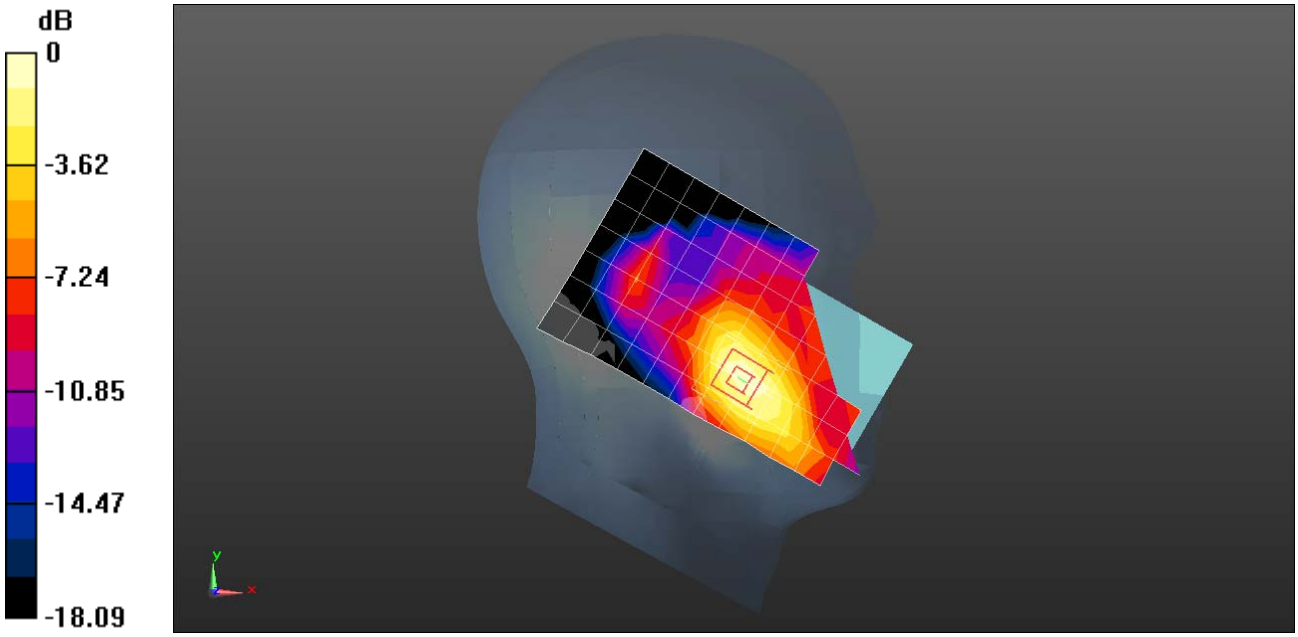
- ¿ Probe: EX3DV4 - SN3744; ConvF(7.54, 7.54, 7.54); Calibrated: 2015-7-24;
- ¿ Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- ¿ Electronics: DAE4 Sn1236; Calibrated: 2015-11-23
- ¿ Phantom: SAM3; Type: SAM; Serial: TP-1597
- ¿ DASY52 52.8.8(1222);

## Configuration/Head/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.701 W/kg

## Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.399 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.857 W/kg
**SAR(1 g) = 0.523 W/kg; SAR(10 g) = 0.317 W/kg**
Maximum value of SAR (measured) = 0.719 W/kg




0 dB = 0.719 W/kg = -1.43 dBW/kg

Date: 2016-5-21

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band II 20M QPSK 1RB 99 offset 18900CH Back side 15mm-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR2**

Communication System: UID 0, LTE-FDD (SC-FDMA, 20MHz, QPSK/16-QAM) (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; $\sigma$ = 1.483 S/m; $\varepsilon_r$ = 52.016; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

## DASY Configuration:

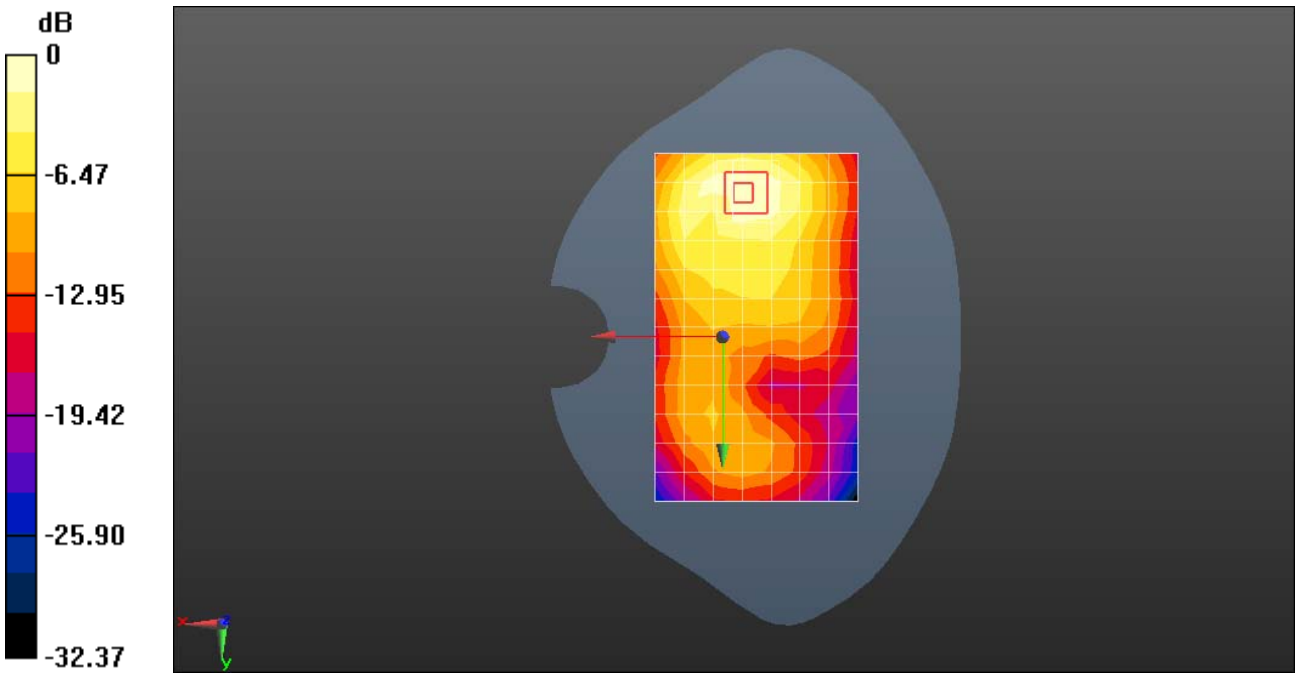
- Probe: EX3DV4 - SN3744; ConvF(7.24, 7.24, 7.24); Calibrated: 2015-7-24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1236; Calibrated: 2015-11-23
- Phantom: SAM3; Type: SAM; Serial: TP-1597
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.08 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.188 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.46 W/kg
**SAR(1 g) = 0.907 W/kg; SAR(10 g) = 0.532 W/kg**
Maximum value of SAR (measured) = 1.25 W/kg




0 dB = 1.08 W/kg = 0.33 dBW/kg

Date: 2016-5-21

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band II 20M QPSK 1RB 99 offset 19100CH Bottom side 10mm with Battery 3-Main Antenna-Repeated

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR2**

Communication System: UID 0, LTE-FDD (SC-FDMA, 20MHz, QPSK/16-QAM) (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; $\sigma$ = 1.5 S/m; $\varepsilon_r$ = 51.963; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

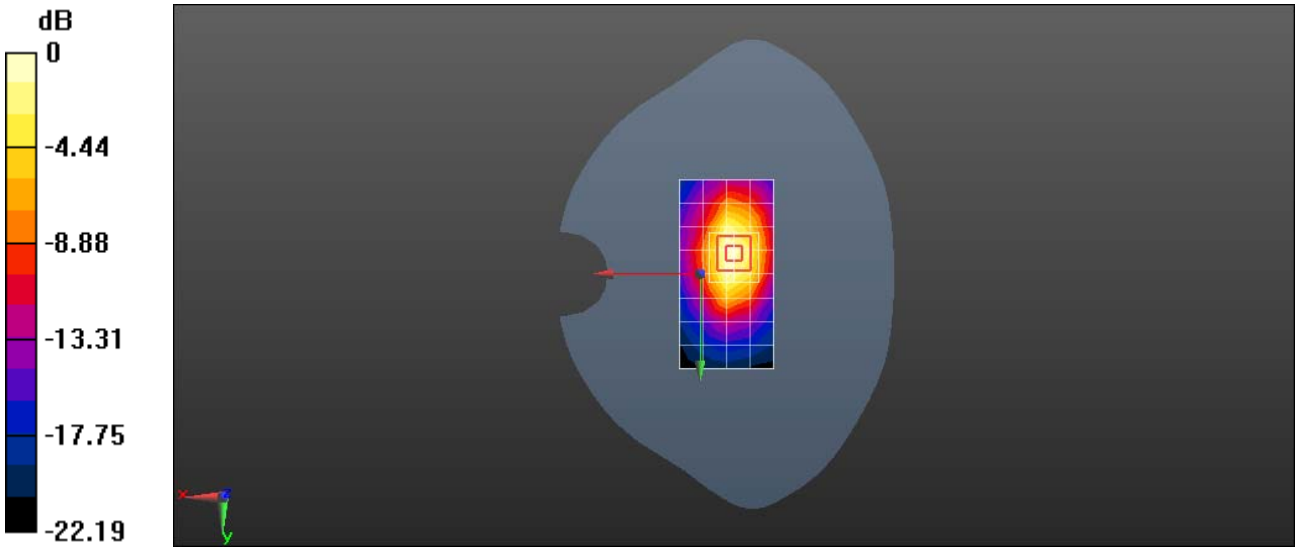
- ¿ Probe: EX3DV4 - SN3744; ConvF(7.24, 7.24, 7.24); Calibrated: 2015-7-24;
- ¿ Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- ¿ Electronics: DAE4 Sn1236; Calibrated: 2015-11-23
- ¿ Phantom: SAM3; Type: SAM; Serial: TP-1597
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.48 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.72 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 1.98 W/kg
**SAR(1 g) = 1.15 W/kg; SAR(10 g) = 0.614 W/kg**
Maximum value of SAR (measured) = 1.67 W/kg




0 dB = 1.48 W/kg = 1.70 dBW/kg

Date: 2016-5-18

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band IV 20M QPSK 1RB 50 offset 20050CH Left touch-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR2**

Communication System: UID 0, LTE-FDD (SC-FDMA, 20MHz, QPSK/16-QAM) (0); Frequency: 1720 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1720 MHz; $\sigma$ = 1.339 S/m; $\varepsilon_r$ = 40.585; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY Configuration:

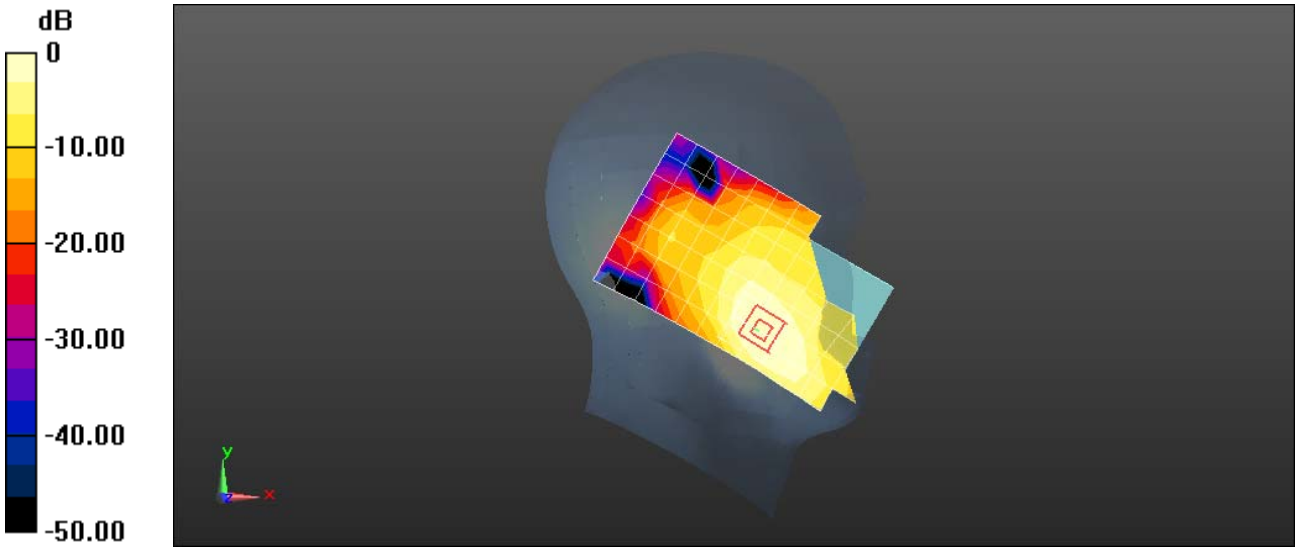
- ¿ Probe: EX3DV4 - SN3744; ConvF(7.84, 7.84, 7.84); Calibrated: 2015-7-24;
- ¿ Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- ¿ Electronics: DAE4 Sn1236; Calibrated: 2015-11-23
- ¿ Phantom: SAM4; Type: SAM; Serial: TP-1620
- ¿ DASY52 52.8.8(1222);

## Configuration/Head/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.492 W/kg

## Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.758 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.638 W/kg
**SAR(1 g) = 0.420 W/kg; SAR(10 g) = 0.270 W/kg**
Maximum value of SAR (measured) = 0.560 W/kg




0 dB = 0.492 W/kg = -3.08 dBW/kg

Date: 2016-6-2

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band IV 20M QPSK 1RB 50 offset 20300CH Back Side 15mm with Battey 2-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 20MHz, QPSK/16-QAM) (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1745 MHz; $\sigma$ = 1.477 S/m; $\varepsilon_r$ = 51.924; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

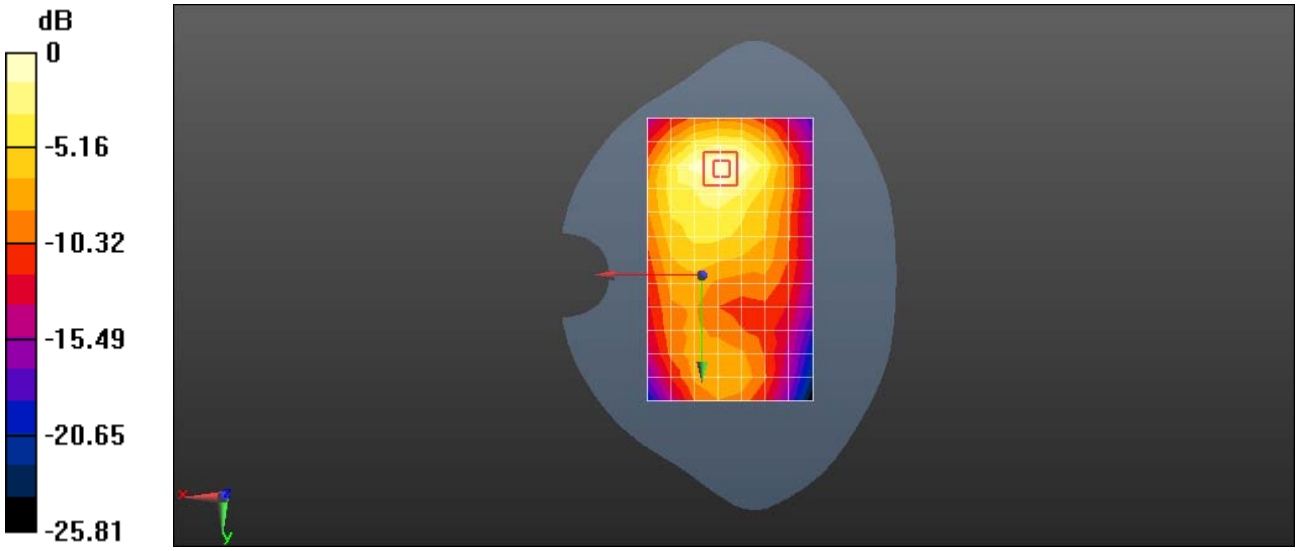
- ¿ Probe: ES3DV3 - SN3168; ConvF(4.95, 4.95, 4.95); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.533 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.293 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.715 W/kg
**SAR(1 g) = 0.464 W/kg; SAR(10 g) = 0.281 W/kg**
Maximum value of SAR (measured) = 0.554 W/kg




0 dB = 0.533 W/kg = -2.73 dBW/kg

Date: 2016-6-2

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band IV 20M QPSK 1RB 50 offset 20050CH Bottom Side 10mm with Battery 3-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 20MHz, QPSK/16-QAM) (0); Frequency: 1720 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1720 MHz; $\sigma$ = 1.453 S/m; $\varepsilon_r$ = 51.941; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

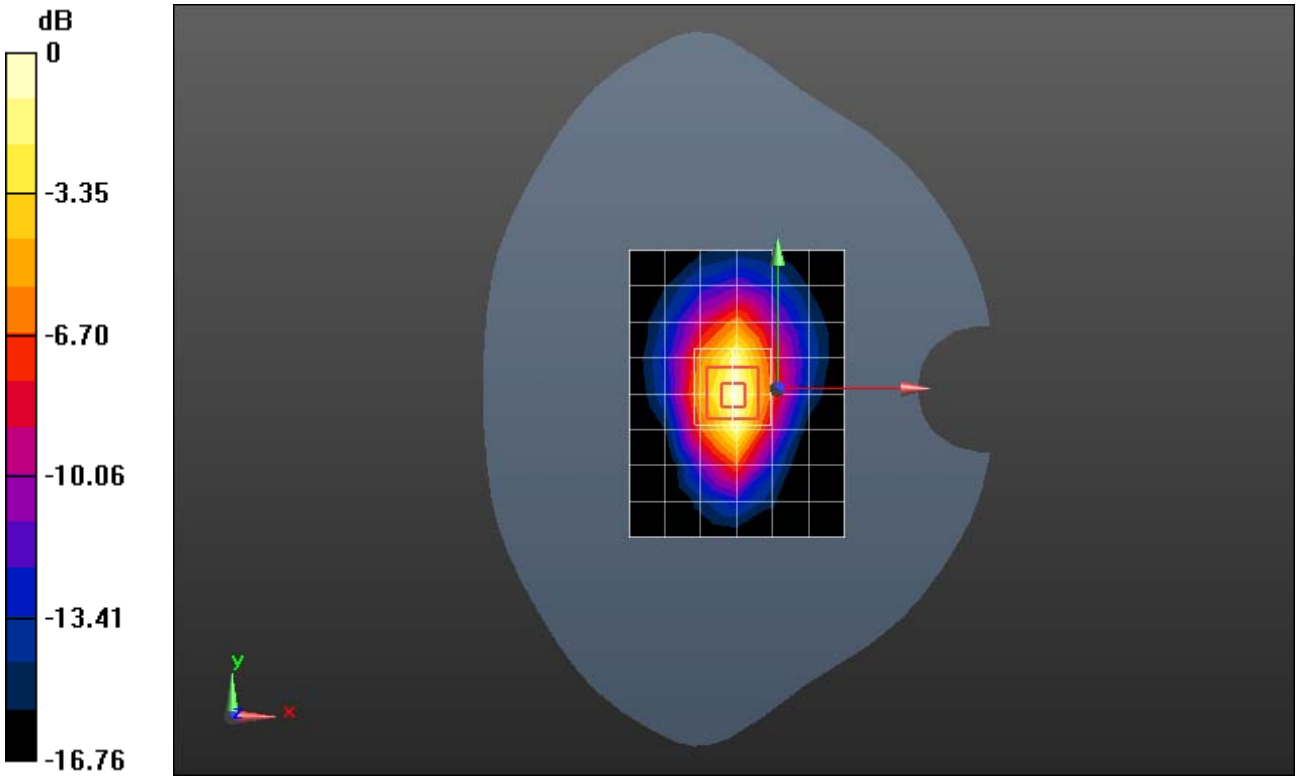
- ¿ Probe: ES3DV3 - SN3168; ConvF(4.95, 4.95, 4.95); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.14 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 28.83 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 1.59 W/kg
**SAR(1 g) = 0.939 W/kg; SAR(10 g) = 0.510 W/kg**




0 dB = 1.14 W/kg = 0.57 dBW/kg

Date: 2016-5-19

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band V 10M QPSK 1RB 25 offset 20450CH Right touch with Battery2-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 10MHz, QPSK/16-QAM) (0); Frequency: 829 MHz;Duty Cycle: 1:1
Medium parameters used: f = 829 MHz; $\sigma$ = 0.91 S/m; $\varepsilon_r$ = 40.708; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY Configuration:

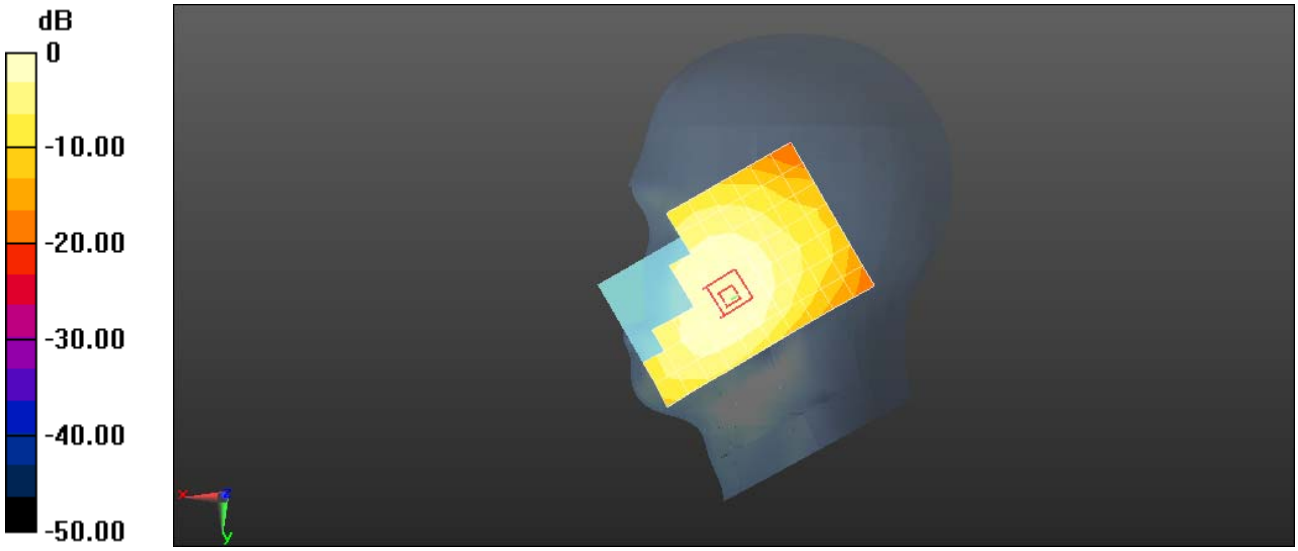
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.32, 6.32, 6.32); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM2; Type: SAM; Serial: TP:1474
- ¿ DASY52 52.8.8(1222);

## Configuration/Head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.289 W/kg

## Configuration/Head/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.334 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.348 W/kg
**SAR(1 g) = 0.278 W/kg; SAR(10 g) = 0.214 W/kg**
Maximum value of SAR (measured) = 0.305 W/kg




0 dB = 0.289 W/kg = -5.39 dBW/kg

Date: 2016-5-26

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band V 10M QPSK 1RB 25 offset 20600CH Back Side 15mm-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 10MHz, QPSK/16-QAM) (0); Frequency: 844 MHz;Duty Cycle: 1:1
Medium parameters used: f = 844 MHz; $\sigma$ = 1.009 S/m; $\varepsilon_r$ = 55.515; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

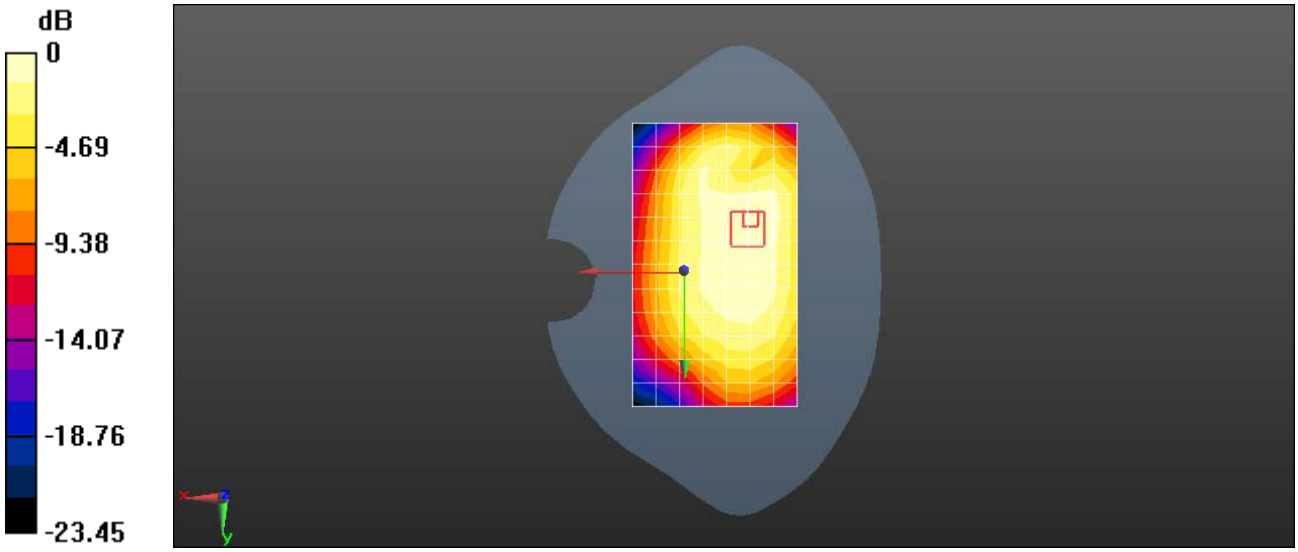
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.24, 6.24, 6.24); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.262 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.03 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.308 W/kg
**SAR(1 g) = 0.237 W/kg; SAR(10 g) = 0.175 W/kg**




0 dB = 0.262 W/kg = -5.82 dBW/kg

Date: 2016-5-26

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band V 10M QPSK 1RB 25 offset 20600CH Back Side 10mm-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 10MHz, QPSK/16-QAM) (0); Frequency: 844 MHz;Duty Cycle: 1:1
Medium parameters used: f = 844 MHz; $\sigma$ = 1.009 S/m; $\varepsilon_r$ = 55.515; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

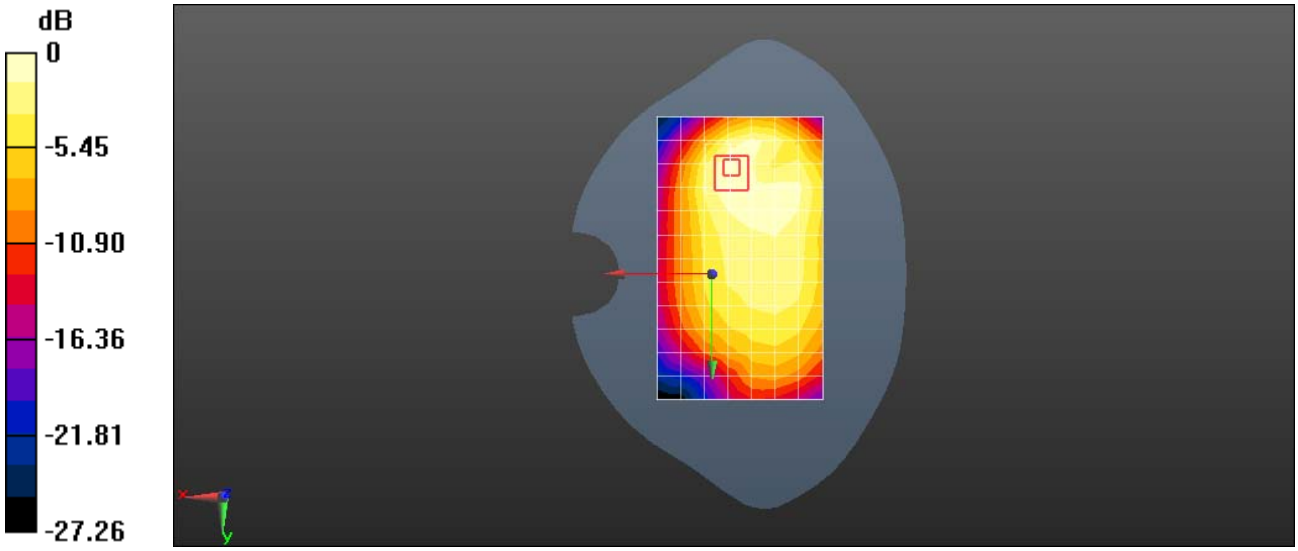
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.24, 6.24, 6.24); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.437 W/kg

## Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.20 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.633 W/kg
**SAR(1 g) = 0.369 W/kg; SAR(10 g) = 0.219 W/kg**
Maximum value of SAR (measured) = 0.451 W/kg




0 dB = 0.437 W/kg = -3.60 dBW/kg

Date: 2016-5-20

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band VII 20M QPSK 1RB 99 offset 20850H Right touch with Battery 3-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR2**

Communication System: UID 0, LTE-FDD (SC-FDMA, 20MHz, QPSK/16-QAM) (0); Frequency: 2510 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; $\sigma$ = 1.898 S/m; $\varepsilon_r$ = 40.493; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY Configuration:

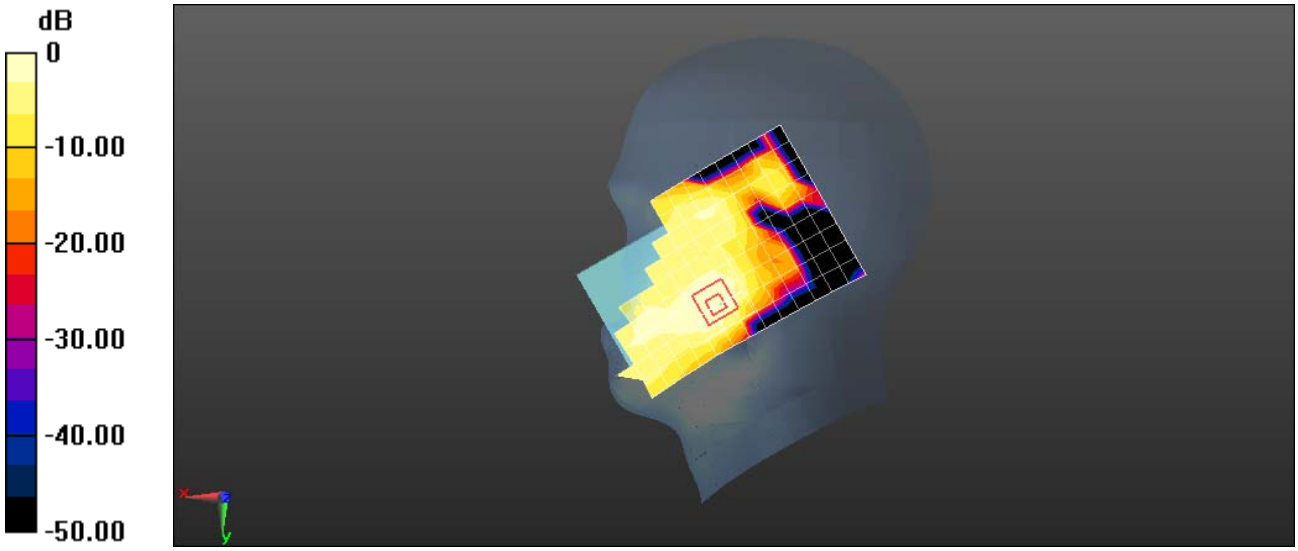
- ¿ Probe: EX3DV4 - SN3744; ConvF(6.68, 6.68, 6.68); Calibrated: 2015-7-24;
- ¿ Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- ¿ Electronics: DAE4 Sn1236; Calibrated: 2015-11-23
- ¿ Phantom: SAM4; Type: SAM; Serial: TP-1620
- ¿ DASY52 52.8.8(1222);

## Configuration/Head/Area Scan (10x15x1): Measurement grid: dx=12mm, dy=12mm

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

## Configuration/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 0.5740 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.161 W/kg
**SAR(1 g) = 0.088 W/kg; SAR(10 g) = 0.047 W/kg**
Maximum value of SAR (measured) = 0.132 W/kg




0 dB = 0.125 W/kg = -9.03 dBW/kg

Date: 2016-6-3

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band VII 20M QPSK 50RB 0 offset 21350CH Back Side 15mm with Battery 3-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 20MHz, QPSK/16-QAM) (0); Frequency: 2560 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2560 MHz; $\sigma$ = 2.102 S/m; $\varepsilon_r$ = 51.45; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

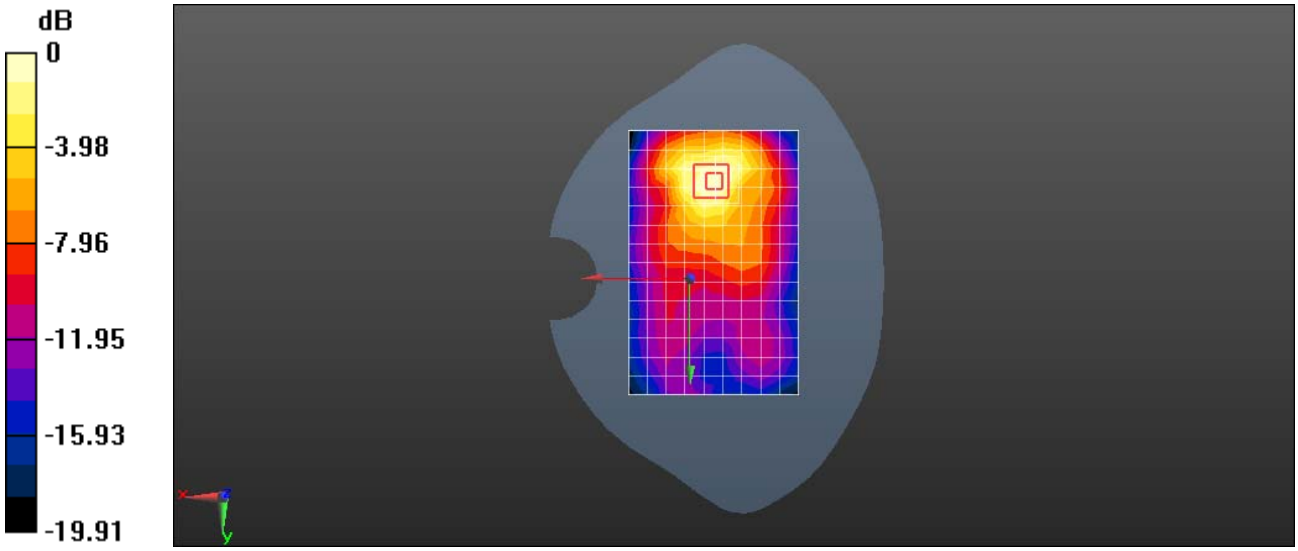
- ¿ Probe: ES3DV3 - SN3168; ConvF(4.23, 4.23, 4.23); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (10x15x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.369 W/kg

## Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.470 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.612 W/kg
**SAR(1 g) = 0.330 W/kg; SAR(10 g) = 0.179 W/kg**
Maximum value of SAR (measured) = 0.413 W/kg




0 dB = 0.369 W/kg = -4.33 dBW/kg

Date: 2016-6-3

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band VII 20M QPSK 50RB 0 offset 21350CH Bottom Side 10mm-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 20MHz, QPSK/16-QAM) (0); Frequency: 2560 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2560 MHz; $\sigma$ = 2.102 S/m; $\varepsilon_r$ = 51.45; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

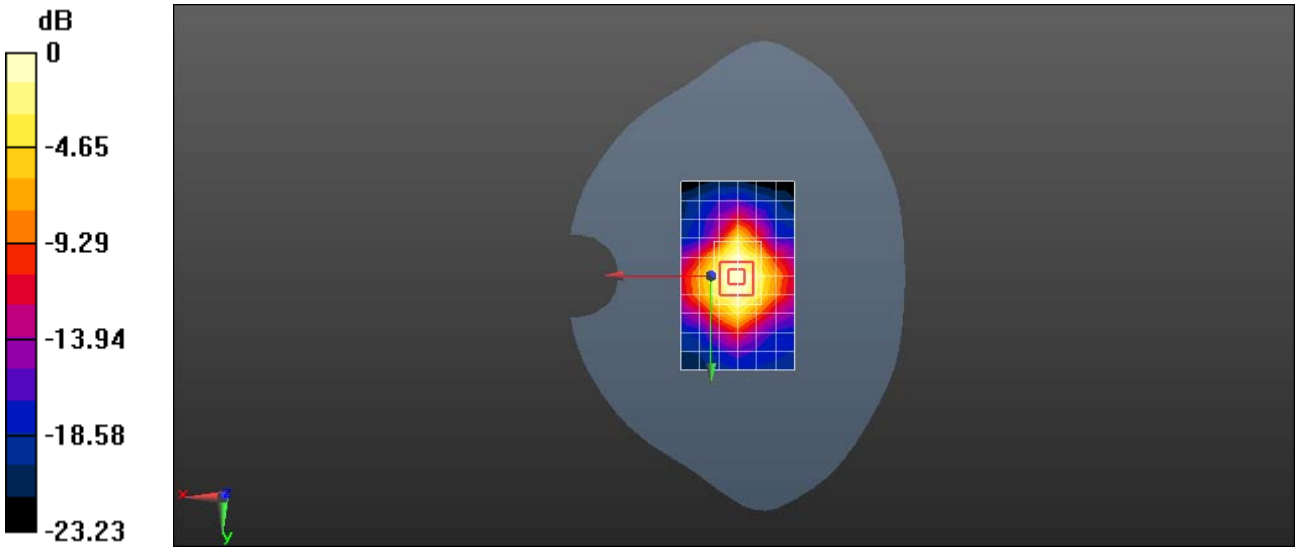
- ¿ Probe: ES3DV3 - SN3168; ConvF(4.23, 4.23, 4.23); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.02 W/kg

## Configuration/Body/Zoom Scan (7x9x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 22.97 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 1.50 W/kg
**SAR(1 g) = 0.814 W/kg; SAR(10 g) = 0.453 W/kg**
Maximum value of SAR (measured) = 0.988 W/kg




0 dB = 1.02 W/kg = 0.09 dBW/kg

Date: 2016-5-20

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band XII 10M QPSK 1RB 25 offset 23130CH Right touch-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 10MHz, QPSK/16-QAM) (0); Frequency: 711 MHz;Duty Cycle: 1:1
Medium parameters used: f = 711 MHz; $\sigma$ = 0.866 S/m; $\varepsilon_r$ = 42.364; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3168; ConvF(6.52, 6.52, 6.52); Calibrated: 2015-9-28;
- Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- Phantom: SAM1; Type: SAM; Serial: TP-1475
- DASY52 52.8.8(1222);

## Configuration/Head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

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

## Configuration/Head/Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.128 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.214 W/kg
**SAR(1 g) = 0.181 W/kg; SAR(10 g) = 0.143 W/kg**
Maximum value of SAR (measured) = 0.193 W/kg

0 dB = 0.194 W/kg = -7.12 dBW/kg

Date: 2016-5-24

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band XII 10M QPSK 1RB 25 offset 23130CH Back Side 15mm-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 10MHz, QPSK/16-QAM) (0); Frequency: 711 MHz;Duty Cycle: 1:1
Medium parameters used: f = 711 MHz; $\sigma$ = 0.939 S/m; $\varepsilon_r$ = 55.224; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

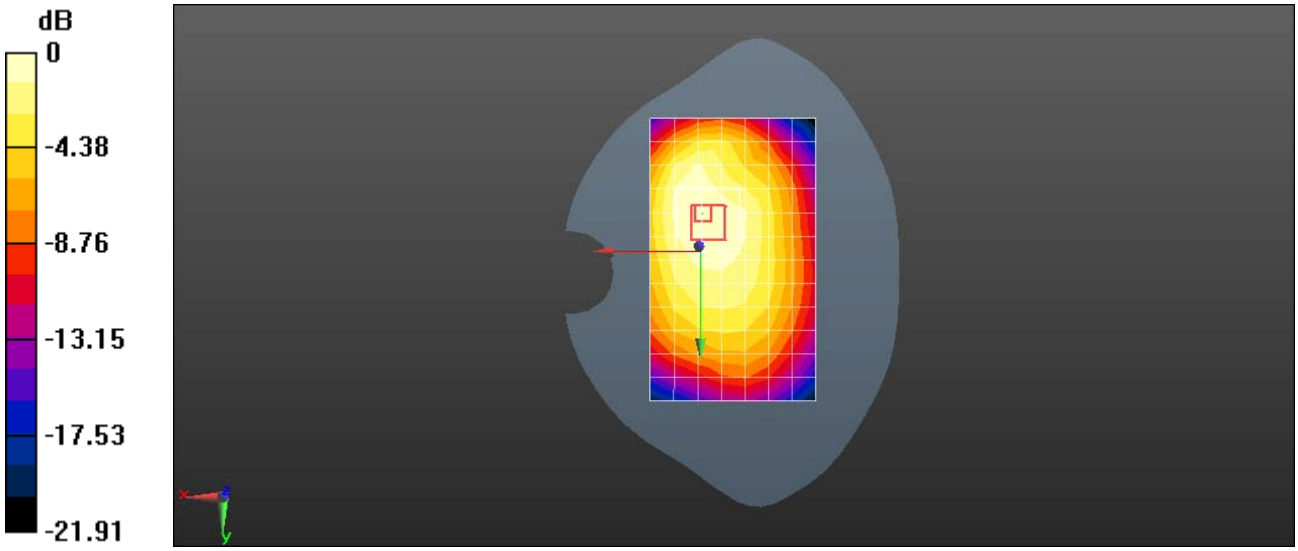
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.39, 6.39, 6.39); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM2; Type: SAM; Serial: TP:1474
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.292 W/kg

## Configuration/Body/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.07 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.359 W/kg
**SAR(1 g) = 0.262 W/kg; SAR(10 g) = 0.192 W/kg**
Maximum value of SAR (measured) = 0.294 W/kg




0 dB = 0.292 W/kg = -5.35 dBW/kg

Date: 2016-5-25

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band XII 10M QPSK 1RB 25 offset 23130CH Back Side 10mm with Baterry 3-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 10MHz, QPSK/16-QAM) (0); Frequency: 711 MHz;Duty Cycle: 1:1
Medium parameters used: f = 711 MHz; $\sigma$ = 0.939 S/m; $\varepsilon_r$ = 55.224; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

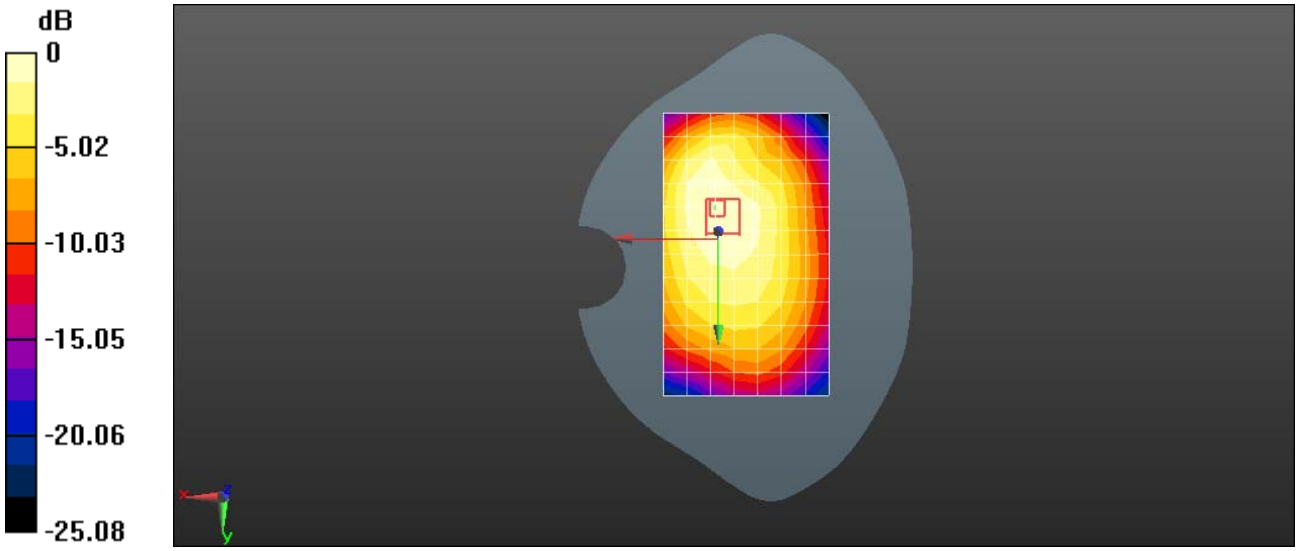
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.39, 6.39, 6.39); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM2; Type: SAM; Serial: TP:1474
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.421 W/kg

## Configuration/Body/Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.88 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 0.594 W/kg
**SAR(1 g) = 0.364 W/kg; SAR(10 g) = 0.254 W/kg**
Maximum value of SAR (measured) = 0.422 W/kg




0 dB = 0.421 W/kg = -3.76 dBW/kg

Date: 2016-5-19

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band XVII 10M QPSK 1RB 49 offset 23780CH Right touch with Battery2-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 10MHz, QPSK/16-QAM) (0); Frequency: 709 MHz;Duty Cycle: 1:1
Medium parameters used: f = 709 MHz; $\sigma$ = 0.863 S/m; $\varepsilon_r$ = 42.396; $\rho$ = 1000 kg/m$^3$
Phantom section: Right Section

DASY Configuration:

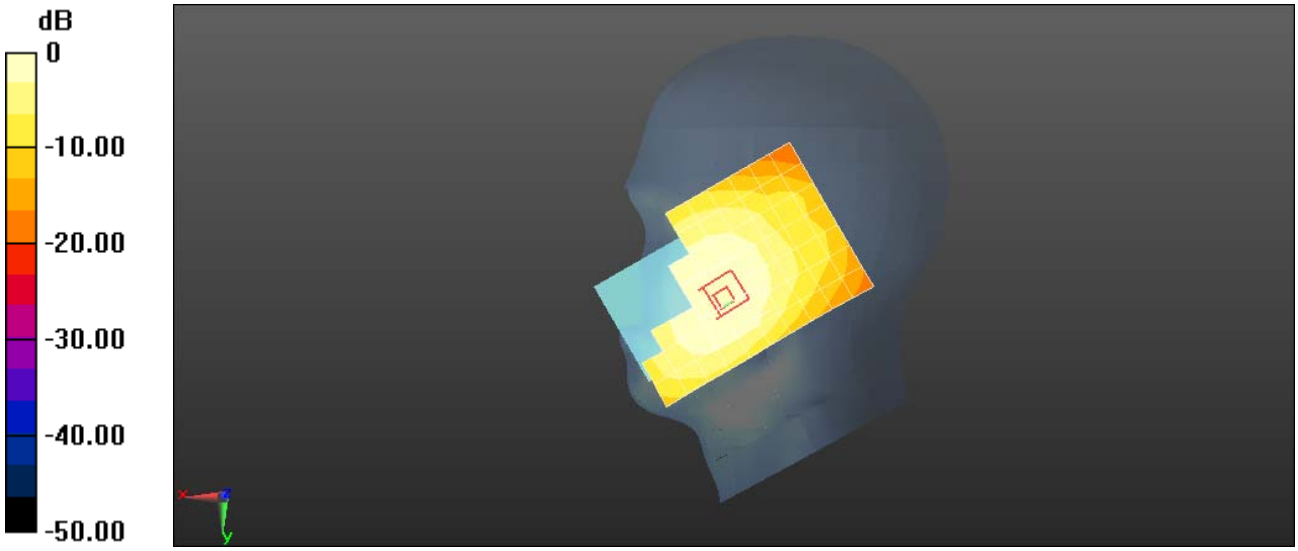
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.52, 6.52, 6.52); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

## Configuration/Head/Area Scan (8x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.286 W/kg

## Configuration/Head/Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.600 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.327 W/kg
**SAR(1 g) = 0.273 W/kg; SAR(10 g) = 0.216 W/kg**
Maximum value of SAR (measured) = 0.292 W/kg




0 dB = 0.286 W/kg = -5.44 dBW/kg

Date: 2016-5-25

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band XVII 10M QPSK 1RB 49 offset 23780CH Back Side 15mm with Baterry 3-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 10MHz, QPSK/16-QAM) (0); Frequency: 709 MHz;Duty Cycle: 1:1
Medium parameters used: f = 709 MHz; $\sigma$ = 0.937 S/m; $\varepsilon_r$ = 55.261; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

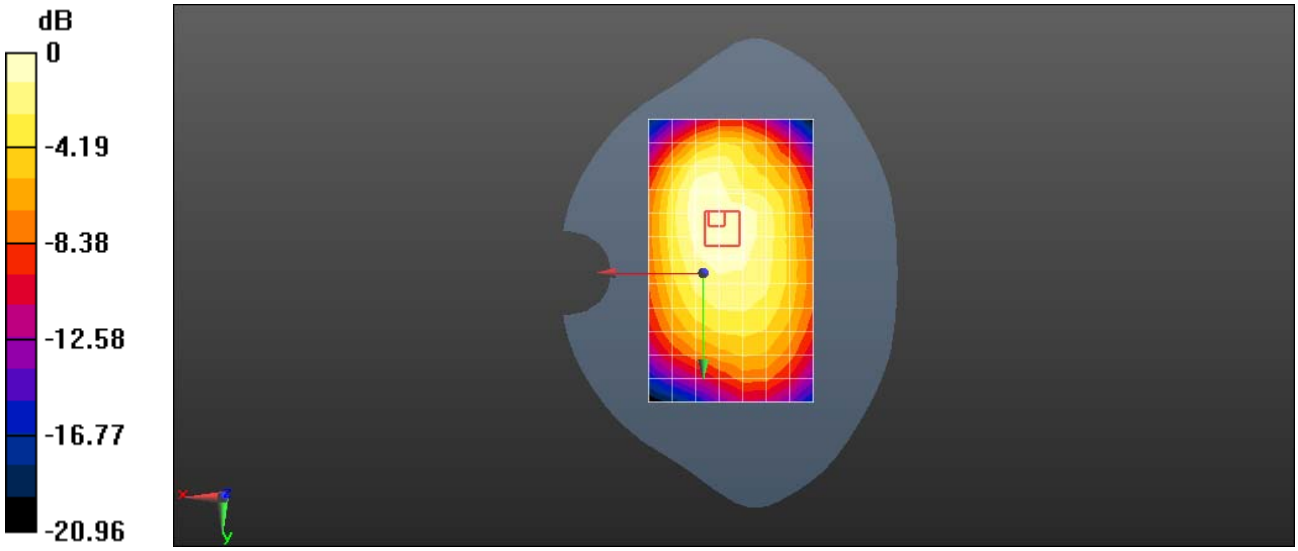
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.39, 6.39, 6.39); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM2; Type: SAM; Serial: TP:1474
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.425 W/kg

## Configuration/Body/Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.86 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.520 W/kg
**SAR(1 g) = 0.378 W/kg; SAR(10 g) = 0.277 W/kg**
Maximum value of SAR (measured) = 0.424 W/kg




0 dB = 0.425 W/kg = -3.72 dBW/kg

Date: 2016-5-25

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 LTE Band XVII 10M QPSK 1RB 49 offset 23780CH Back Side 10mm with Battery 3-Main Antenna

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, LTE-FDD (SC-FDMA, 10MHz, QPSK/16-QAM) (0); Frequency: 709 MHz;Duty Cycle: 1:1
Medium parameters used: f = 709 MHz; $\sigma$ = 0.937 S/m; $\varepsilon_r$ = 55.261; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

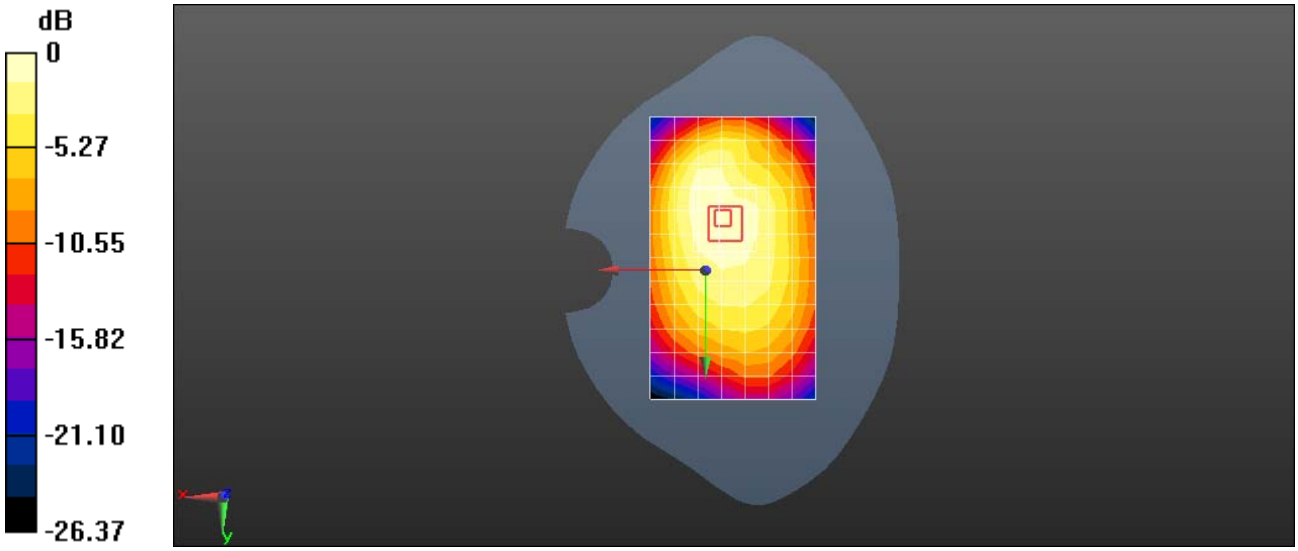
- ¿ Probe: ES3DV3 - SN3168; ConvF(6.39, 6.39, 6.39); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM2; Type: SAM; Serial: TP:1474
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.483 W/kg

## Configuration/Body/Zoom Scan (6x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.65 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 0.674 W/kg
**SAR(1 g) = 0.414 W/kg; SAR(10 g) = 0.287 W/kg**
Maximum value of SAR (measured) = 0.492 W/kg




0 dB = 0.483 W/kg = -3.16 dBW/kg

Date: 2016-6-16

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 WIFI 2.4G 802.11b 11CH Left touch

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR2**

Communication System: UID 0, WiFi(802.11a/b/g/n/ac) (0); Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2462 MHz; $\sigma$ = 1.863 S/m; $\varepsilon_r$ = 39.101; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY Configuration:

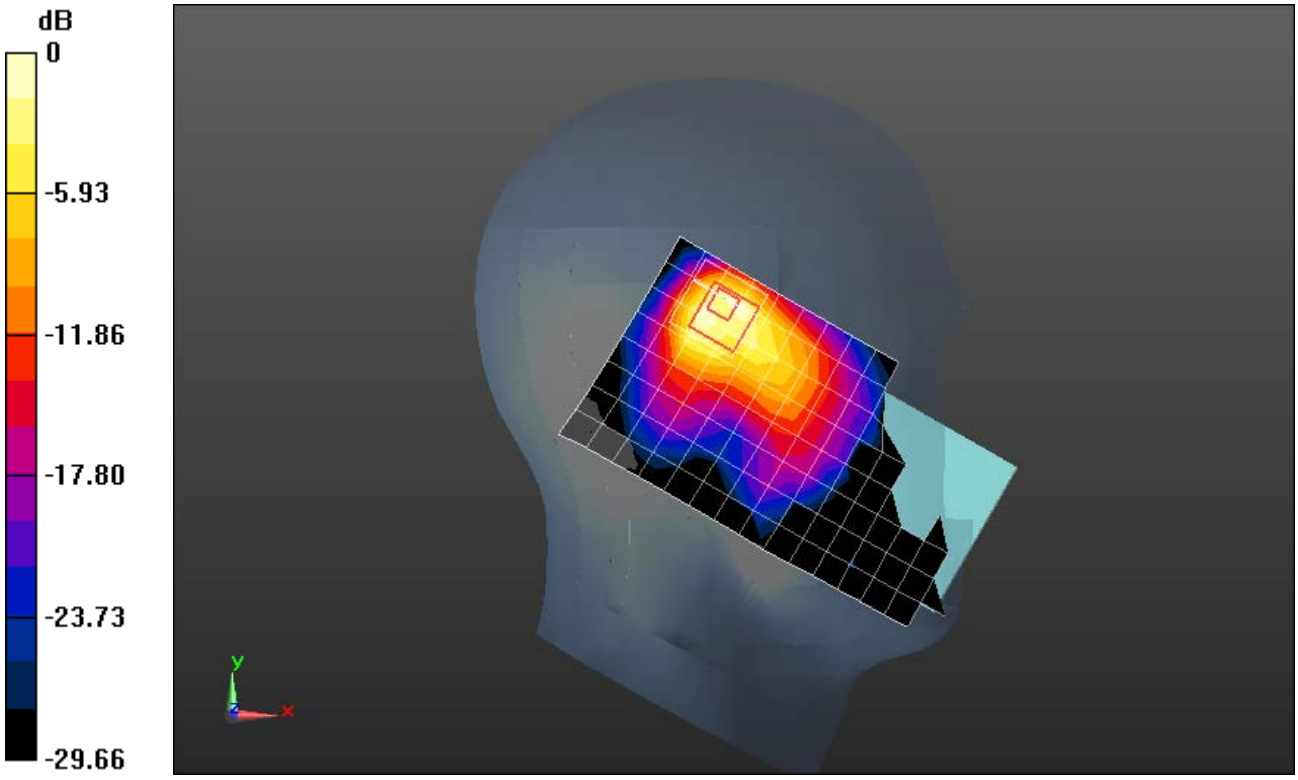
- ¿ Probe: EX3DV4 - SN3744; ConvF(6.84, 6.84, 6.84); Calibrated: 2015-7-24;
- ¿ Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 31.0
- ¿ Electronics: DAE4 Sn1236; Calibrated: 2015-11-23
- ¿ Phantom: SAM3; Type: SAM; Serial: TP-1597
- ¿ DASY52 52.8.8(1222);

## Configuration/Head/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.52 W/kg

## Configuration/Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.418 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 2.25 W/kg
**SAR(1 g) = 0.780 W/kg; SAR(10 g) = 0.366 W/kg**
Maximum value of SAR (measured) = 1.53 W/kg




0 dB = 1.53 W/kg = 1.84 dBW/kg

Date: 2016-6-3

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 wifi 2.4G 802.11b 6CH Back Side 15mm

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, WiFi(802.11a/b/g/n/ac) (0); Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; $\sigma$ = 1.99 S/m; $\varepsilon_r$ = 52.034; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

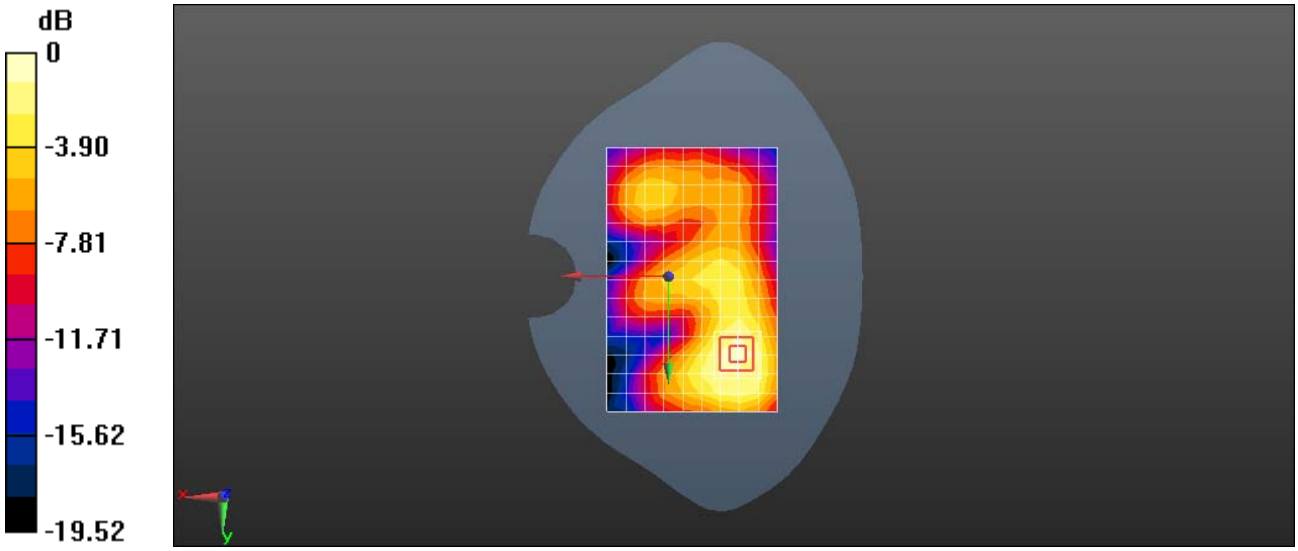
- ¿ Probe: ES3DV3 - SN3168; ConvF(4.35, 4.35, 4.35); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (10x15x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.134 W/kg

## Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.499 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.194 W/kg
**SAR(1 g) = 0.108 W/kg; SAR(10 g) = 0.060 W/kg**
Maximum value of SAR (measured) = 0.133 W/kg




0 dB = 0.134 W/kg = -8.73 dBW/kg

Date: 2016-6-3

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 wifi 2.4G 80.211b 11CH Right Side 10mm with Battery 3

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, WiFi(802.11a/b/g/n/ac) (0); Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2462 MHz; $\sigma$ = 2.022 S/m; $\varepsilon_r$ = 51.963; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

- ¿ Probe: ES3DV3 - SN3168; ConvF(4.35, 4.35, 4.35); Calibrated: 2015-9-28;
- ¿ Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (7x15x1): Measurement grid: dx=12mm, dy=12mm

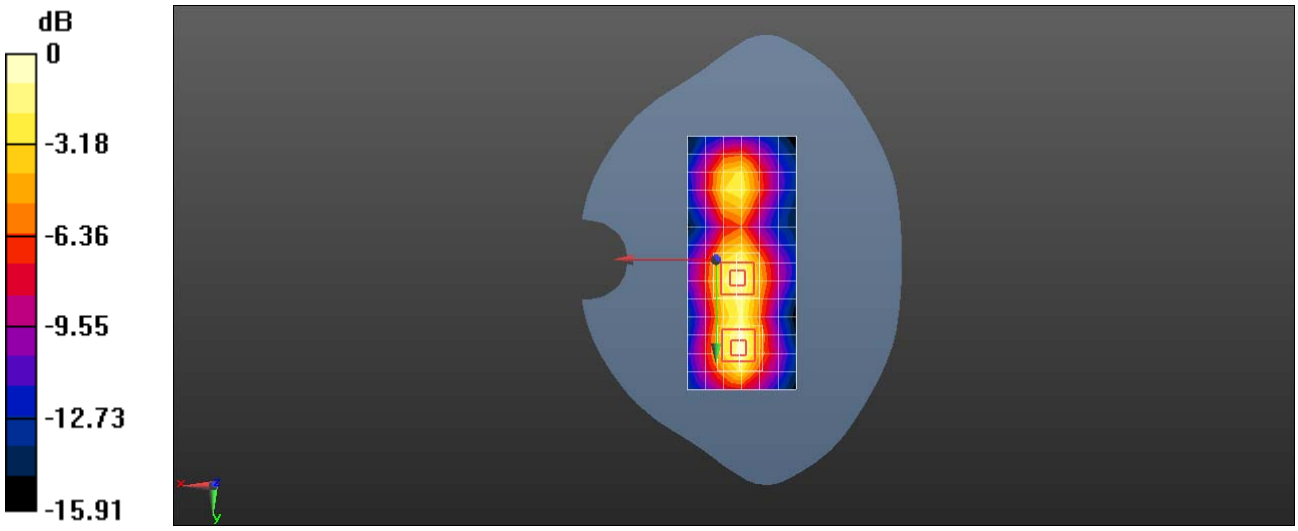
Maximum value of SAR (measured) = 0.285 W/kg

## Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.27 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.461 W/kg
**SAR(1 g) = 0.231 W/kg; SAR(10 g) = 0.112 W/kg**
Maximum value of SAR (measured) = 0.299 W/kg

## Configuration/Body/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.27 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.396 W/kg
**SAR(1 g) = 0.209 W/kg; SAR(10 g) = 0.112 W/kg**
Maximum value of SAR (measured) = 0.262 W/kg




0 dB = 0.285 W/kg = -5.45 dBW/kg

Date: 2016-6-14

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 Wifi 5G 802.11a 153CH Left touch

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, WiFi(802.11a/b/g/n/ac) (0); Frequency: 5765 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5765 MHz; $\sigma$ = 5.283 S/m; $\varepsilon_r$ = 36.235; $\rho$ = 1000 kg/m$^3$
Phantom section: Left Section

DASY Configuration:

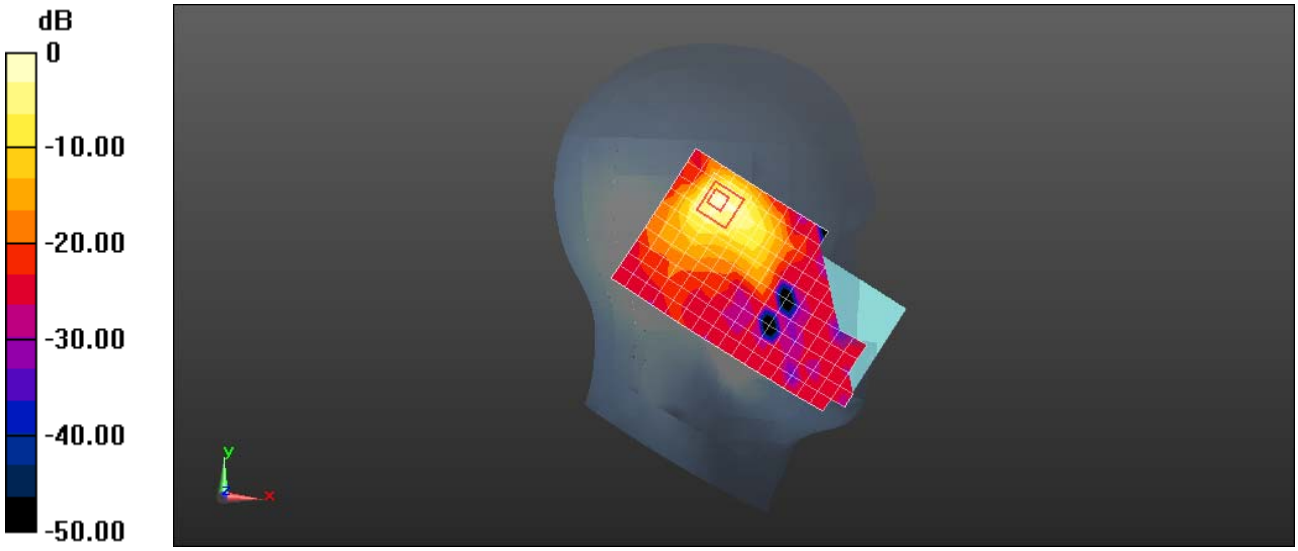
- ¿ Probe: EX3DV4 - SN3736; ConvF(4.44, 4.44, 4.44); Calibrated: 2016-4-26;
- ¿ Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 25.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

## Configuration/Head/Area Scan (11x18x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 2.24 W/kg

## Configuration/Head/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 6.045 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 4.13 W/kg
**SAR(1 g) = 0.839 W/kg; SAR(10 g) = 0.264 W/kg**
Maximum value of SAR (measured) = 2.33 W/kg




0 dB = 2.24 W/kg = 3.50 dBW/kg

Date: 2016-6-15

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 Wifi 5G 802.11a 157CH Front Side 15mm

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, WiFi(802.11a/b/g/n/ac) (0); Frequency: 5785 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5785 MHz; $\sigma$ = 6.187 S/m; $\varepsilon_r$ = 48.514; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

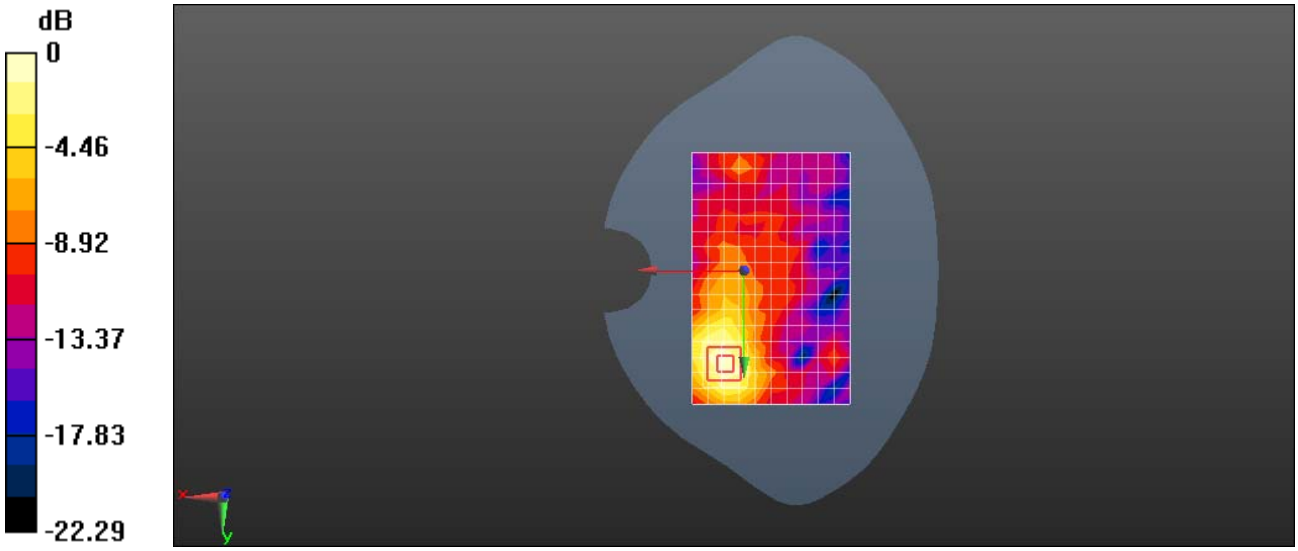
- ¿ Probe: EX3DV4 - SN3736; ConvF(3.6, 3.6, 3.6); Calibrated: 2016-4-26;
- ¿ Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 25.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM2; Type: SAM; Serial: TP:1474
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (11x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.405 W/kg

## Configuration/Body/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 3.001 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.703 W/kg
**SAR(1 g) = 0.197 W/kg; SAR(10 g) = 0.079 W/kg**
Maximum value of SAR (measured) = 0.436 W/kg




0 dB = 0.405 W/kg = -3.93 dBW/kg

Date: 2016-6-15

Test Laboratory: HUAWEI SAR/HAC Lab

# FRD-L04 Wifi 5G 802.11a 161CH Right Side 10mm

**DUT: FRD-L04; Type: Smart Phone; Serial: SAR1**

Communication System: UID 0, WiFi(802.11a/b/g/n/ac) (0); Frequency: 5805 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5805 MHz; $\sigma$ = 6.245 S/m; $\varepsilon_r$ = 48.301; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section

DASY Configuration:

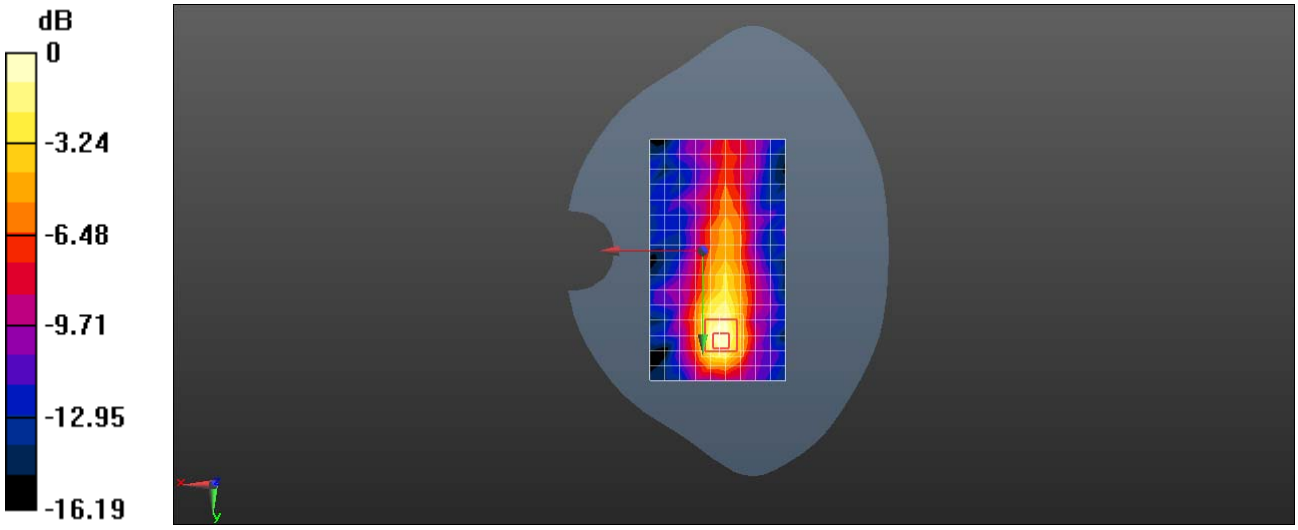
- ¿ Probe: EX3DV4 - SN3736; ConvF(3.6, 3.6, 3.6); Calibrated: 2016-4-26;
- ¿ Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 25.0
- ¿ Electronics: DAE4 Sn851; Calibrated: 2015-7-20
- ¿ Phantom: SAM1; Type: SAM; Serial: TP-1475
- ¿ DASY52 52.8.8(1222);

## Configuration/Body/Area Scan (10x17x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.325 W/kg

## Configuration/Body/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 5.202 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.518 W/kg
**SAR(1 g) = 0.138 W/kg; SAR(10 g) = 0.049 W/kg**
Maximum value of SAR (measured) = 0.368 W/kg




0 dB = 0.325 W/kg = -4.88 dBW/kg