

## **SAR Plots**

- Verification Plots
- SAR Test Plots

## DT&C Co., Ltd.

**DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d047**

Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1800$  MHz;  $\sigma = 1.388$  S/m;  $\epsilon_r = 40.019$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section

### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(5.56, 5.56, 5.56); Calibrated: 2018-03-21; Electronics: DAE4 Sn1394  
Sensor-Surface: 3mm (Mechanical Surface Detection)  
Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679  
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-08; Ambient Temp: 21.6; Tissue Temp: 21.8

### **1800 MHz System Head Verification (250 mW)**

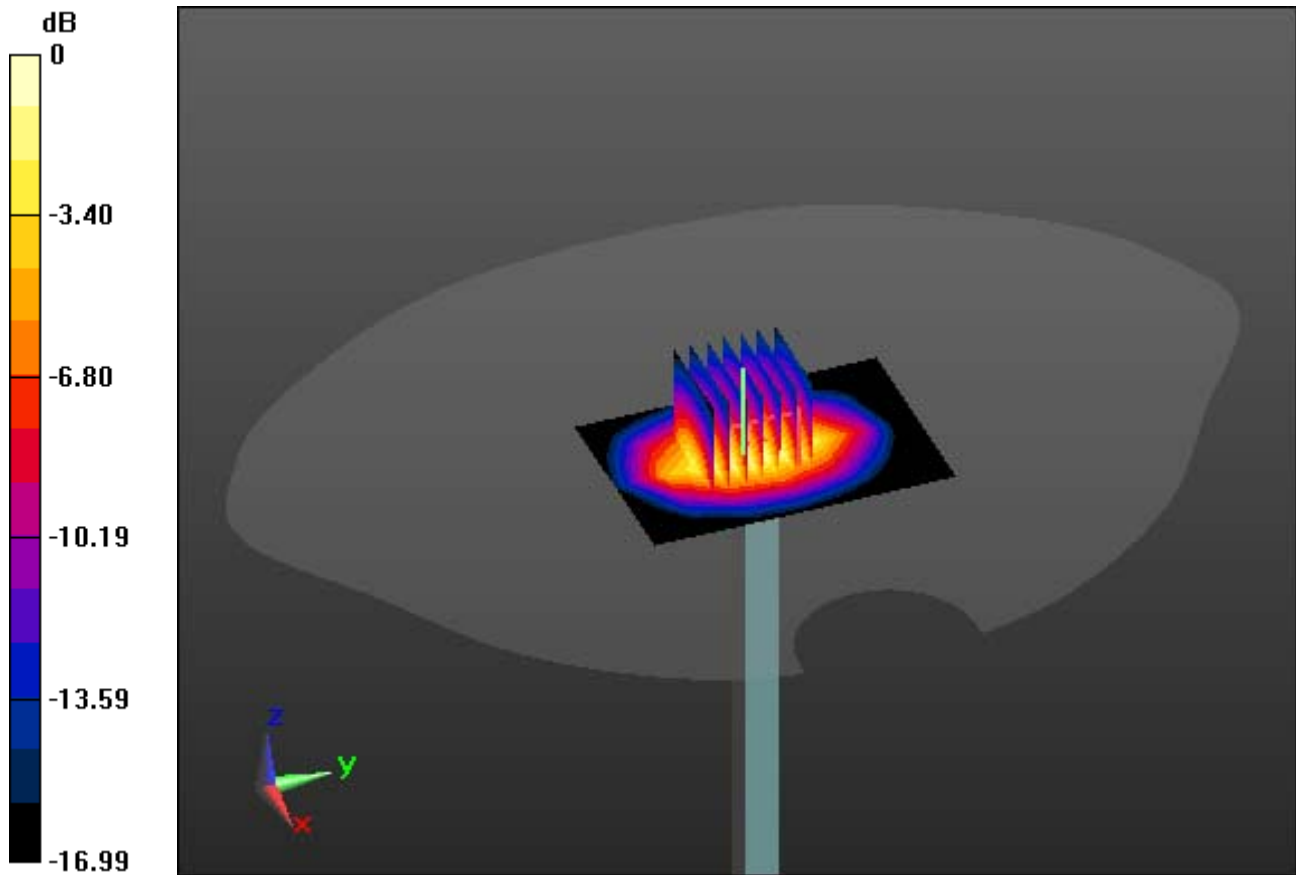
**Area Scan (5x7x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = 0.05 dB

Peak SAR (extrapolated) = 18.4 W/kg

**SAR(1 g) = 9.70 W/kg; SAR(10 g) = 5.06 W/kg**



0 dB = 13.9 W/kg

## DT&C Co., Ltd.

**DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d047**

Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1800$  MHz;  $\sigma = 1.531$  S/m;  $\epsilon_r = 51.371$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(5.1, 5.1, 5.1); Calibrated: 2018-03-21; Electronics: DAE4 Sn1394  
Sensor-Surface: 3mm (Mechanical Surface Detection)  
Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679  
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-09; Ambient Temp: 21.7; Tissue Temp: 22.1

### **1800 MHz System Body Verification (250 mW)**

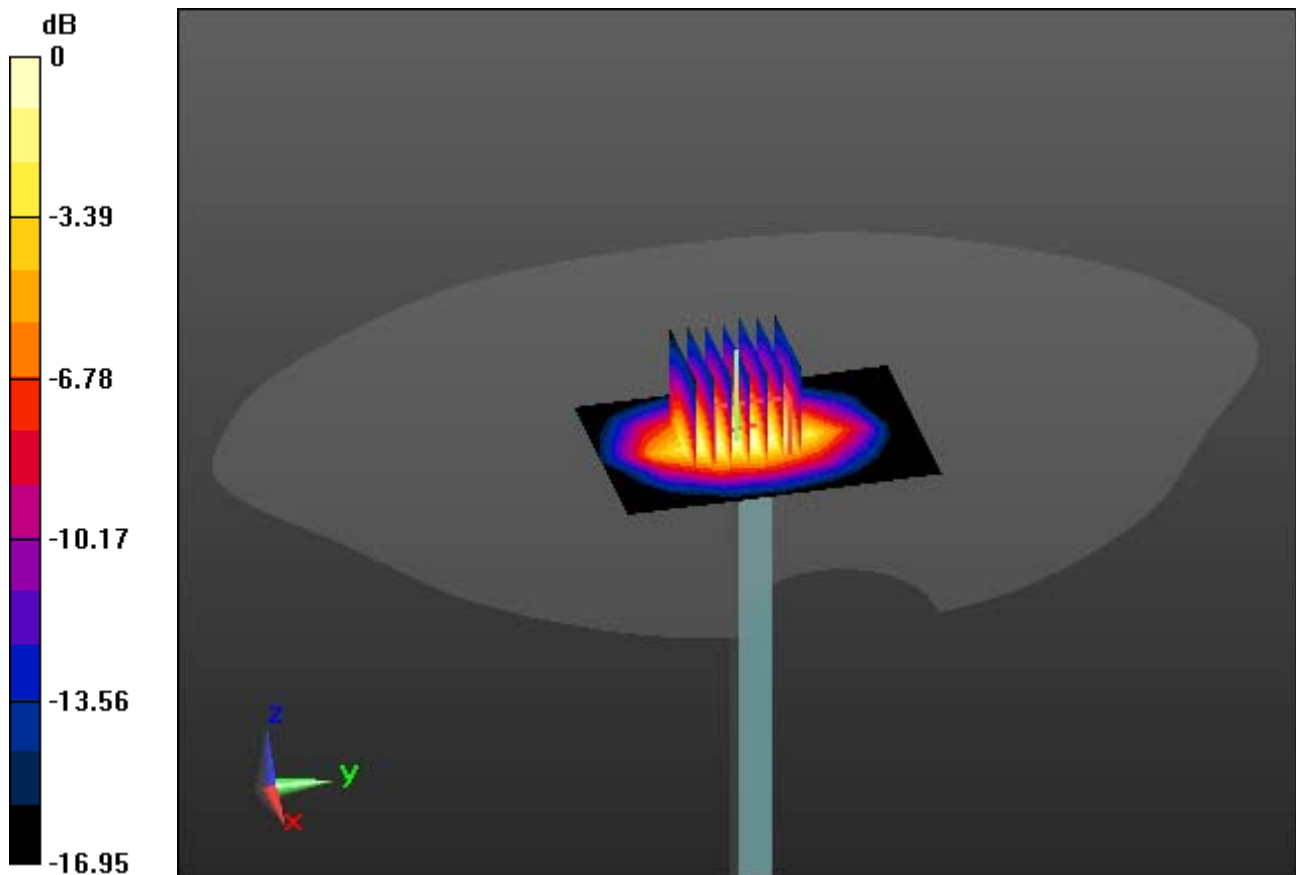
**Area Scan (5x7x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = 0.02 dB

Peak SAR (extrapolated) = 18.1 W/kg

**SAR(1 g) = 9.63 W/kg; SAR(10 g) = 4.98 W/kg**



0 dB = 14.0 W/kg

## DT&C Co., Ltd.

**DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d047**

Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1800 \text{ MHz}$ ;  $\sigma = 1.393 \text{ S/m}$ ;  $\epsilon_r = 40.255$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(5.56, 5.56, 5.56); Calibrated: 2018-03-21; Electronics: DAE4 Sn1394  
Sensor-Surface: 3mm (Mechanical Surface Detection)  
Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679  
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-10; Ambient Temp: 21.4; Tissue Temp: 21.5

### **1800 MHz System Head Verification (250 mW)**

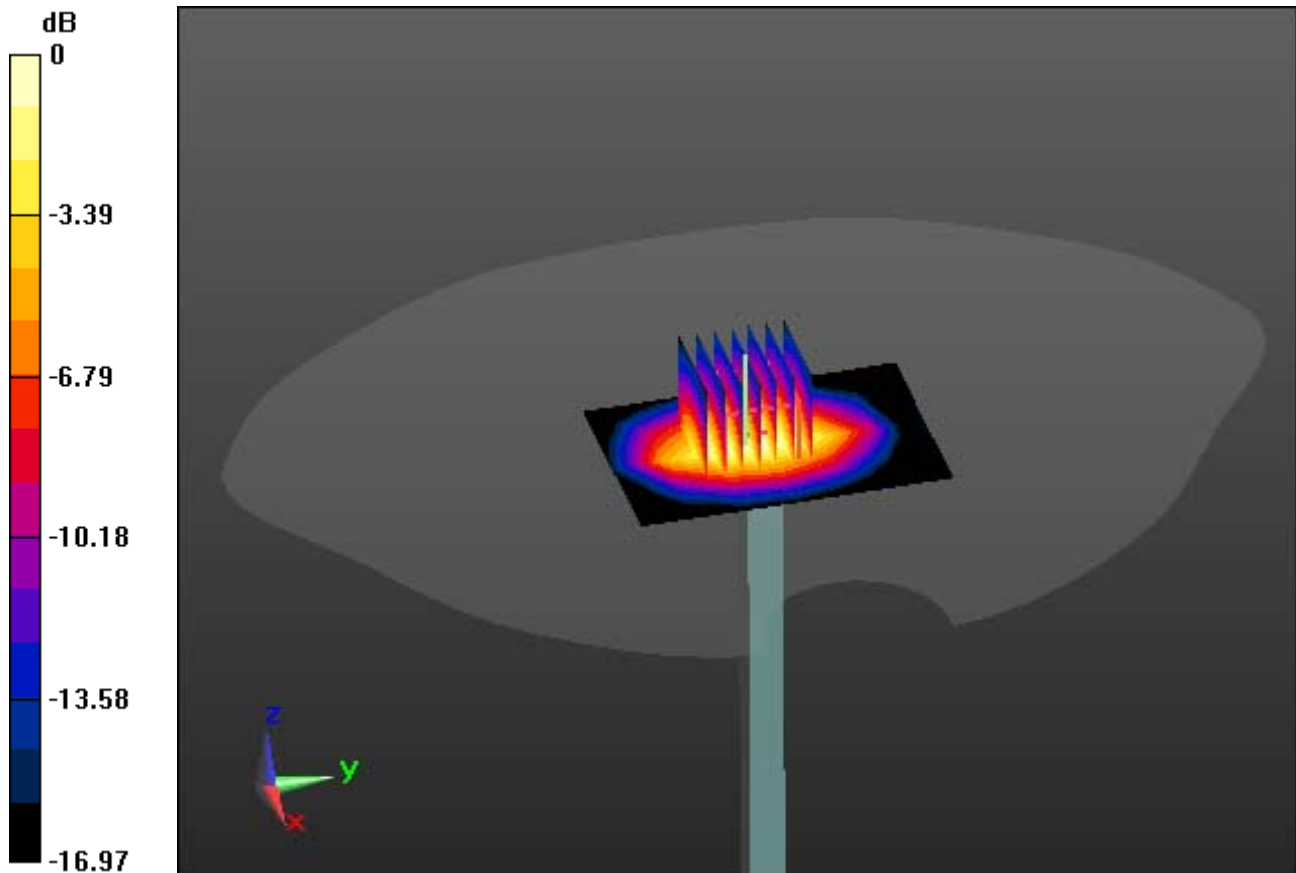
**Area Scan (5x7x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Power Drift = 0.09 dB

Peak SAR (extrapolated) = 18.9 W/kg

**SAR(1 g) = 9.76 W/kg; SAR(10 g) = 5.09 W/kg**



0 dB = 14.5 W/kg

## DT&C Co., Ltd.

**DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d047**

Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1800 \text{ MHz}$ ;  $\sigma = 1.538 \text{ S/m}$ ;  $\epsilon_r = 51.797$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(5.1, 5.1, 5.1); Calibrated: 2018-03-21; Electronics: DAE4 Sn1394  
Sensor-Surface: 3mm (Mechanical Surface Detection)  
Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679  
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-11; Ambient Temp: 21.3; Tissue Temp: 21.5

### **1800 MHz System Body Verification (250 mW)**

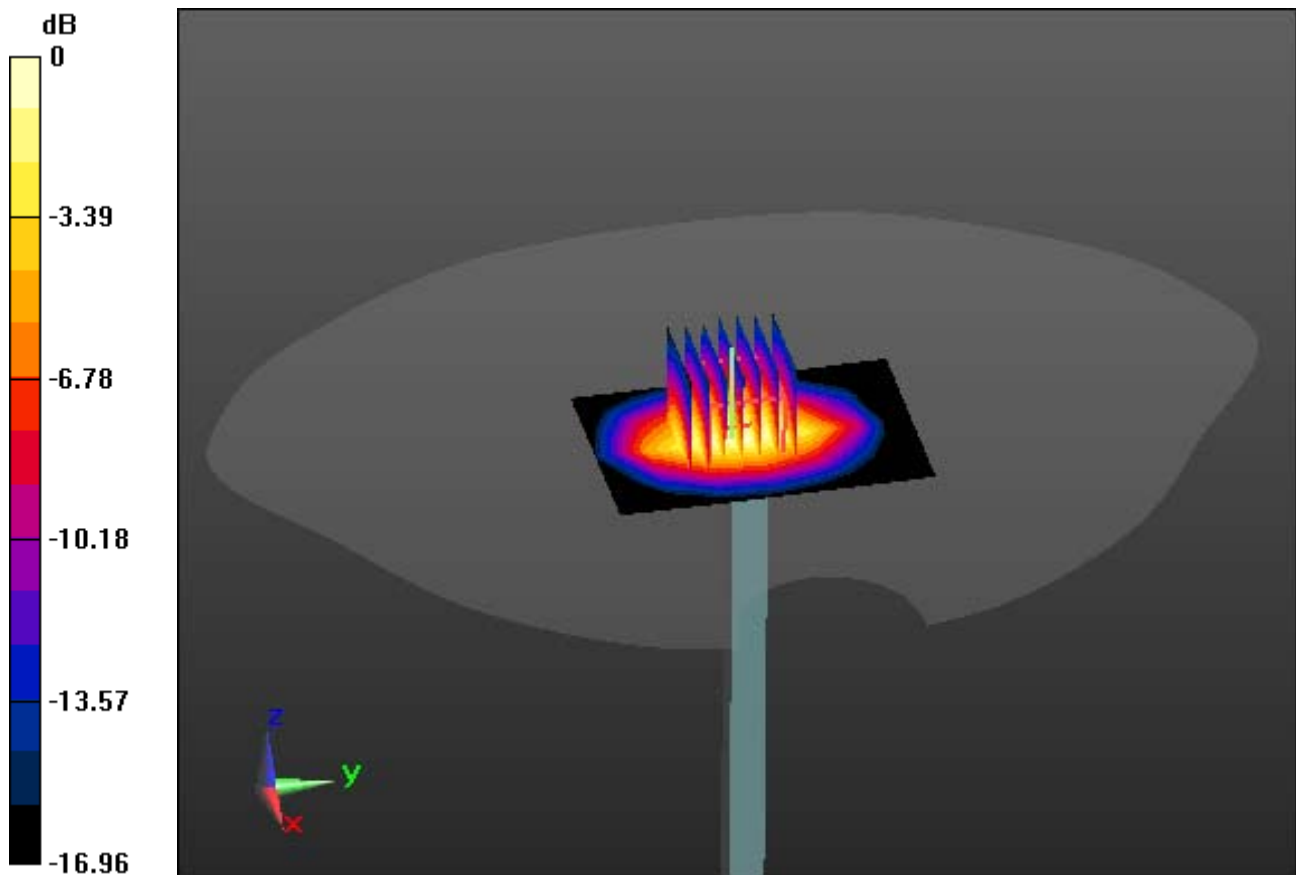
**Area Scan (5x7x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Power Drift = 0.04 dB

Peak SAR (extrapolated) = 18.5 W/kg

**SAR(1 g) = 9.67 W/kg; SAR(10 g) = 5.01 W/kg**



0 dB = 14.5 W/kg

## DT&C Co., Ltd.

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d029**

Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.409$  S/m;  $\epsilon_r = 39.71$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(5.26, 5.26, 5.26); Calibrated: 2018-03-21; Electronics: DAE4 Sn1394  
Sensor-Surface: 3mm (Mechanical Surface Detection)  
Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679  
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-01; Ambient Temp: 21.4; Tissue Temp: 21.7

### **1900 MHz System Head Verification (250 mW)**

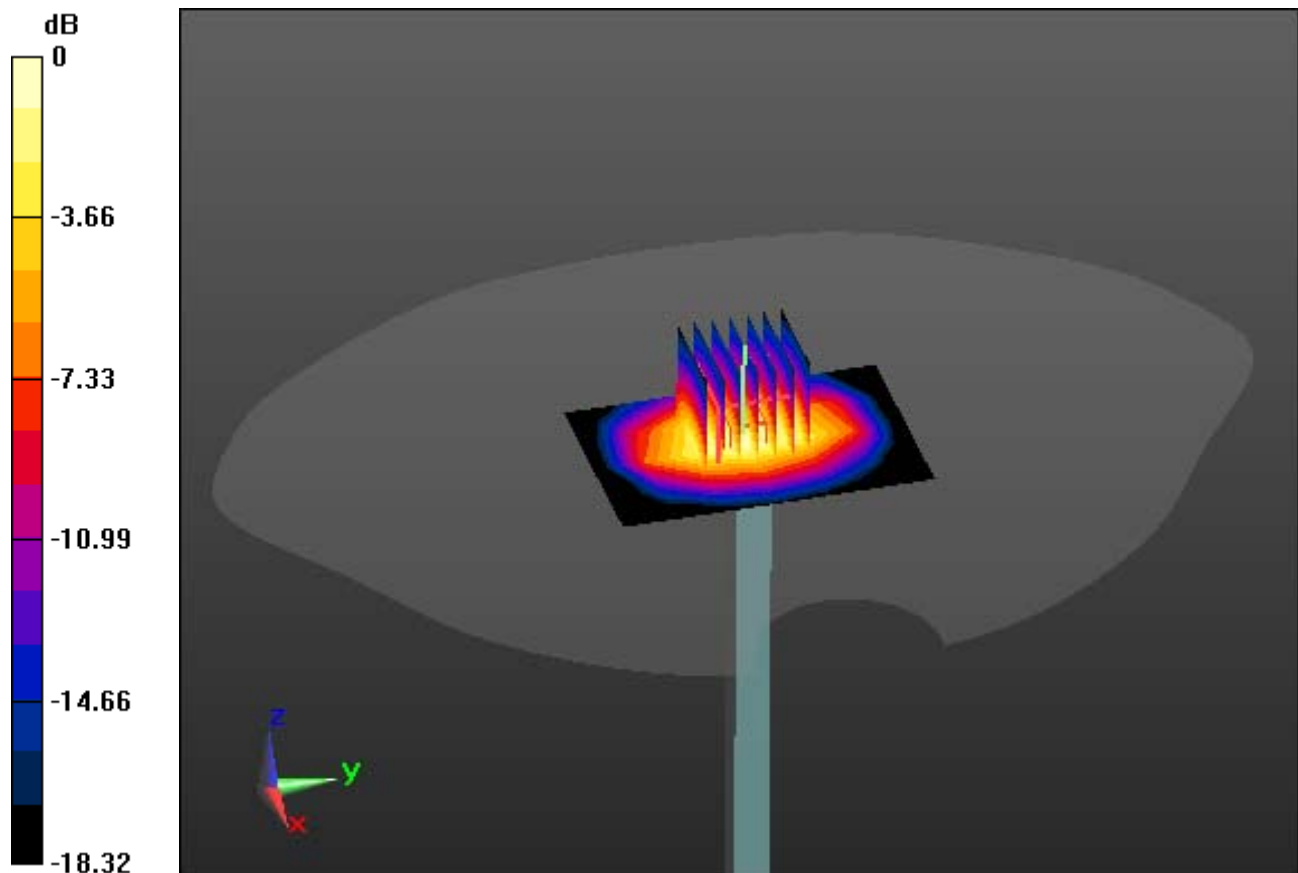
**Area Scan (5x7x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Power Drift = 0.11 dB

Peak SAR (extrapolated) = 17.7 W/kg

**SAR(1 g) = 9.64 W/kg; SAR(10 g) = 4.97 W/kg**



0 dB = 13.1 W/kg

## DT&C Co., Ltd.

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d029**

Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.538$  S/m;  $\epsilon_r = 51.579$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(4.88, 4.88, 4.88); Calibrated: 2018-03-21; Electronics: DAE4 Sn1394  
Sensor-Surface: 3mm (Mechanical Surface Detection)  
Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679  
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-02; Ambient Temp: 21.6; Tissue Temp: 21.8

### **1900 MHz System Body Verification (250 mW)**

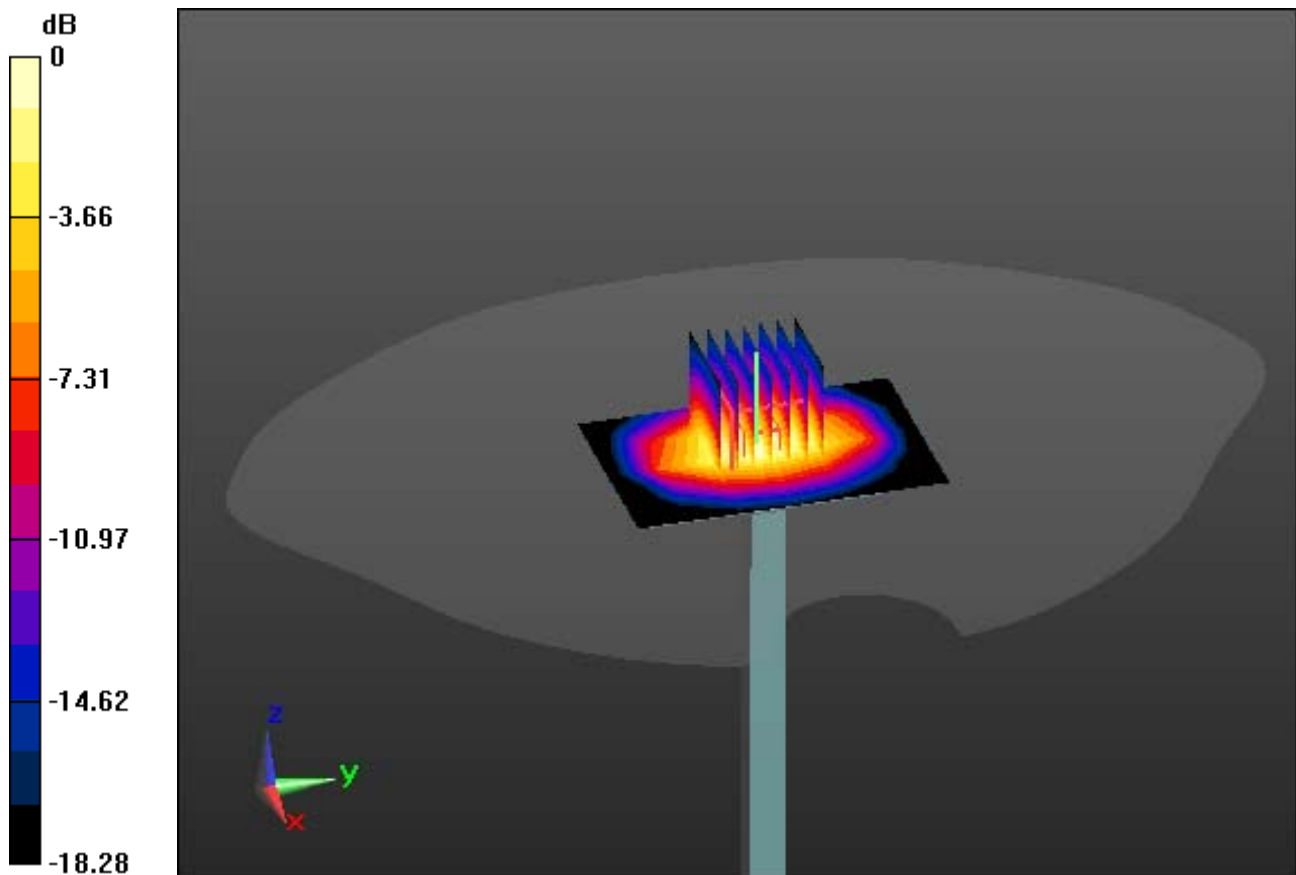
**Area Scan (5x7x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = 0.13 dB

Peak SAR (extrapolated) = 18.3 W/kg

**SAR(1 g) = 9.77 W/kg; SAR(10 g) = 5.06 W/kg**



0 dB = 14.1 W/kg

## DT&C Co., Ltd.

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d029**

Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.411$  S/m;  $\epsilon_r = 39.749$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section

### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(5.26, 5.26, 5.26); Calibrated: 2018-03-21; Electronics: DAE4 Sn1394  
Sensor-Surface: 3mm (Mechanical Surface Detection)  
Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679  
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-03; Ambient Temp: 21.2; Tissue Temp: 21.5

### **1900 MHz System Head Verification (250 mW)**

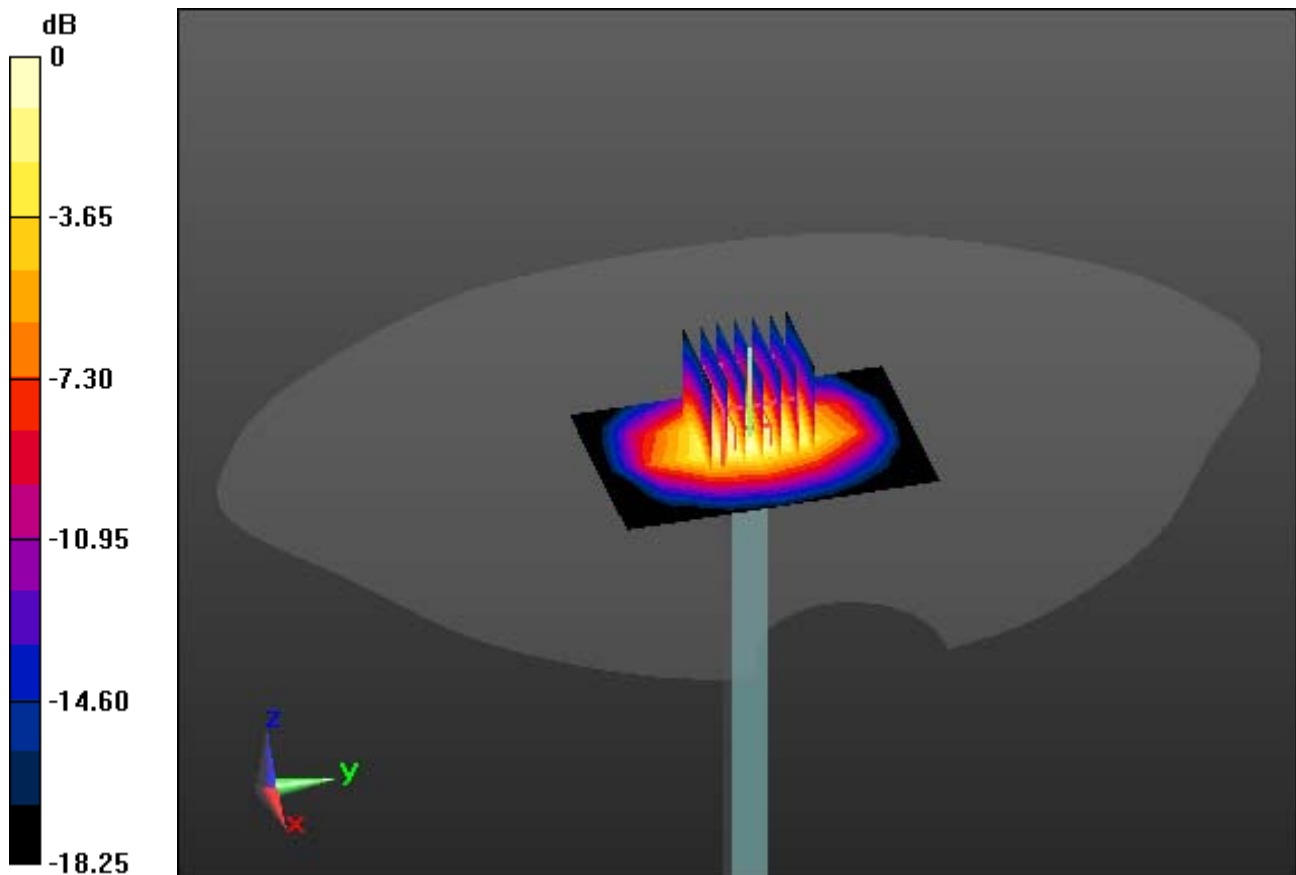
**Area Scan (5x7x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = 0.16 dB

Peak SAR (extrapolated) = 18.1 W/kg

**SAR(1 g) = 9.68 W/kg; SAR(10 g) = 4.99 W/kg**



0 dB = 13.4 W/kg

## DT&C Co., Ltd.

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d029**

Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.531$  S/m;  $\epsilon_r = 51.739$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(4.88, 4.88, 4.88); Calibrated: 2018-03-21; Electronics: DAE4 Sn1394  
Sensor-Surface: 3mm (Mechanical Surface Detection)  
Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679  
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-04; Ambient Temp: 21.8; Tissue Temp: 22.1

### **1900 MHz System Body Verification (250 mW)**

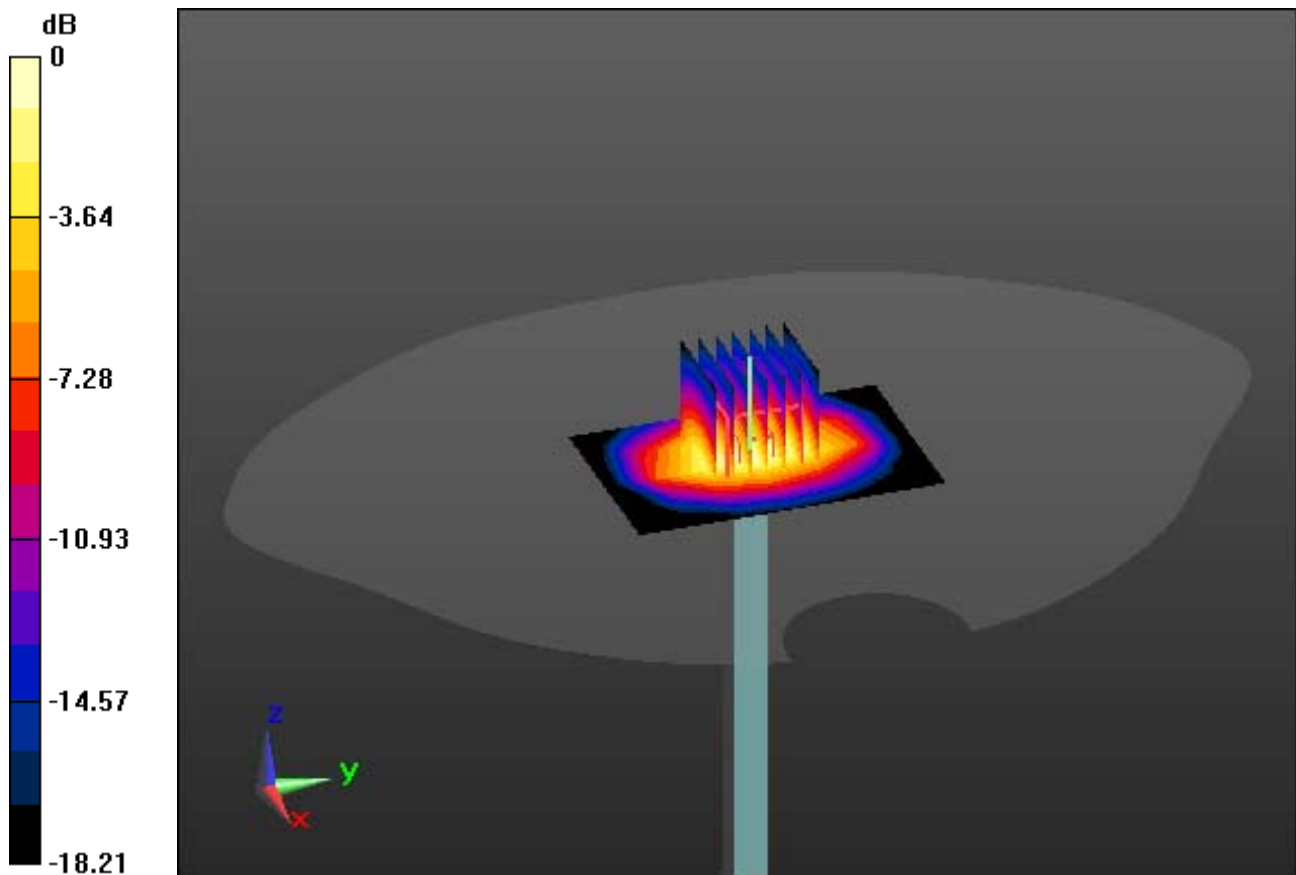
**Area Scan (5x7x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = 0.15 dB

Peak SAR (extrapolated) = 18.1 W/kg

**SAR(1 g) = 9.75 W/kg; SAR(10 g) = 5.04 W/kg**



0 dB = 13.8 W/kg

## DT&C Co., Ltd.

**DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:726**

Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.844$  S/m;  $\epsilon_r = 38.231$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section

### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(4.82, 4.82, 4.82); Calibrated: 2018-03-21; Electronics: DAE4 Sn1394  
Sensor-Surface: 3mm (Mechanical Surface Detection)  
Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679  
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-14; Ambient Temp: 21.8; Tissue Temp: 21.9

### **2450 MHz System Head Verification (100 mW)**

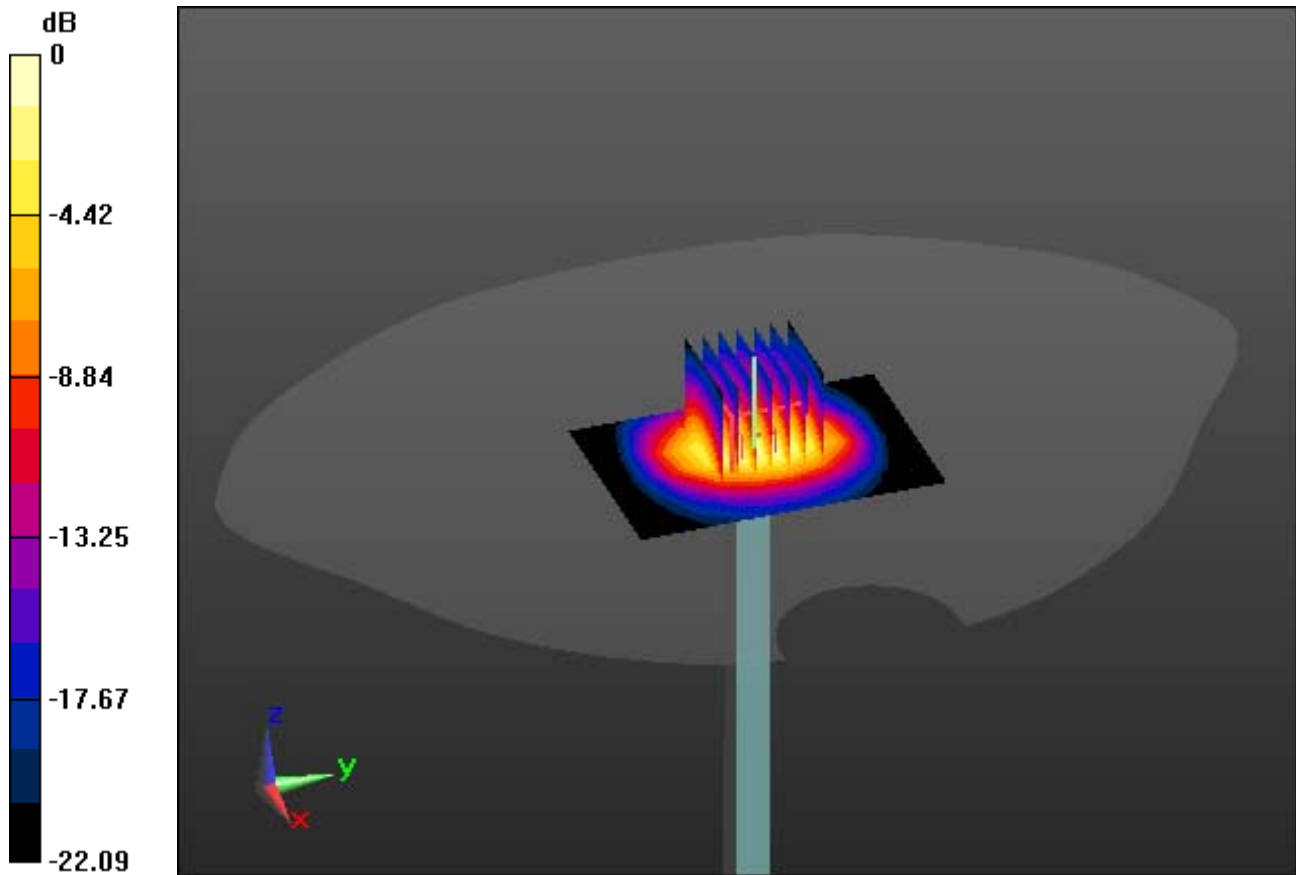
**Area Scan (7x10x1):** Measurement grid: dx=10mm, dy=10mm

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

Power Drift = -0.12 dB

Peak SAR (extrapolated) = 11.1 W/kg

**SAR(1 g) = 5.25 W/kg; SAR(10 g) = 2.37 W/kg**



0 dB = 8.14 W/kg

## DT&C Co., Ltd.

**DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:726**

Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.893$  S/m;  $\epsilon_r = 52.584$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section

### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(4.48, 4.48, 4.48); Calibrated: 2018-03-21; Electronics: DAE4 Sn1394  
Sensor-Surface: 3mm (Mechanical Surface Detection)  
Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679  
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-15; Ambient Temp: 21.5; Tissue Temp: 21.8

### **2450 MHz System Body Verification (100 mW)**

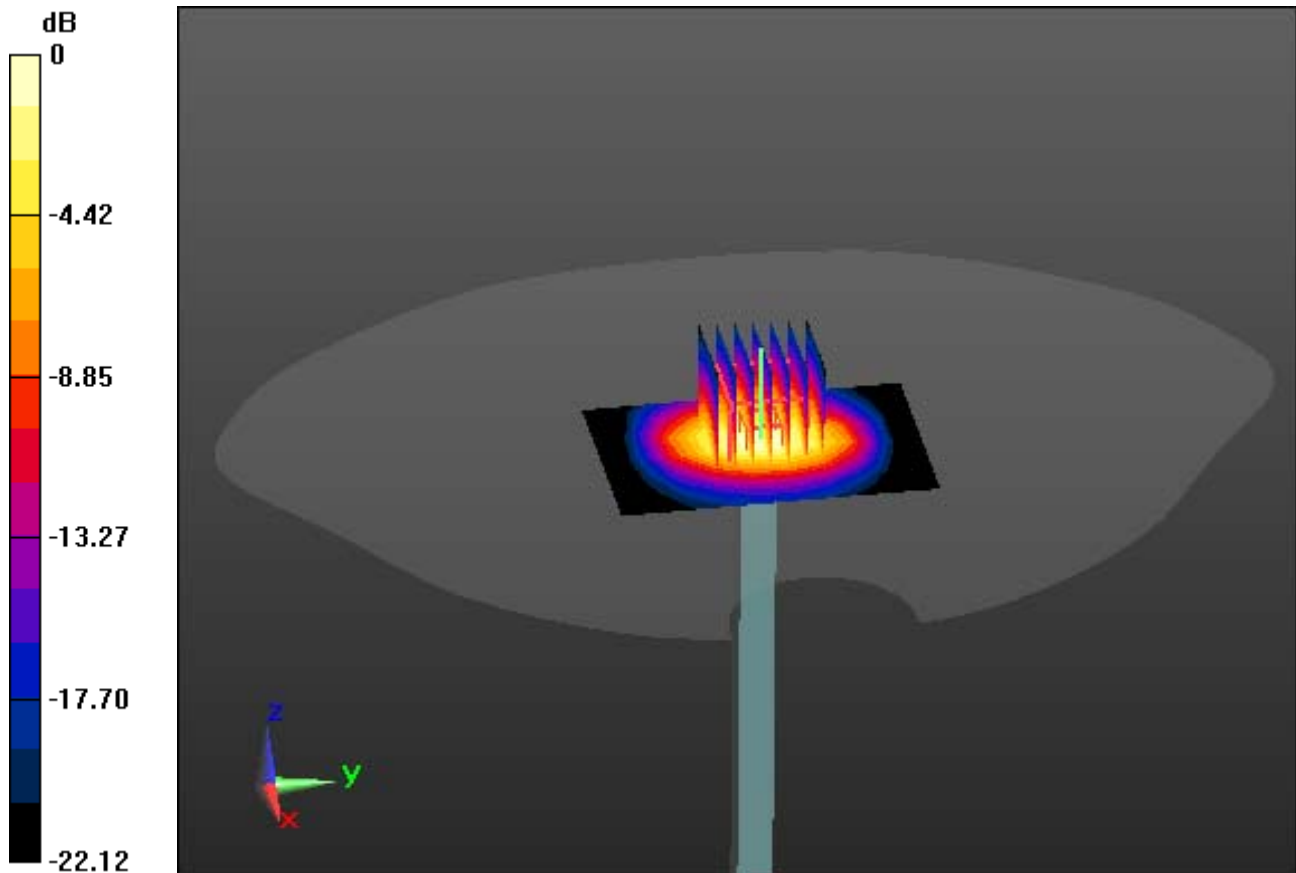
**Area Scan (7x10x1):** Measurement grid: dx=10mm, dy=10mm

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

Power Drift = -0.09 dB

Peak SAR (extrapolated) = 11.4 W/kg

**SAR(1 g) = 5.15 W/kg; SAR(10 g) = 2.33 W/kg**



0 dB = 7.96 W/kg

## DT&C Co., Ltd.

### **DUT: HA81; Type: Bar**

Communication System: UID 0, PCS 1900 (0); Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.39$  S/m;  $\epsilon_r = 39.798$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(5.26, 5.26, 5.26); Calibrated: 3/21/2018; Electronics: DAE4 Sn1394

Sensor-Surface: 3mm (Mechanical Surface Detection)

Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-01; Ambient Temp: 21.4; Tissue Temp: 21.7

### **Left Touch, PCS1900 Ch. 661, Ant Internal, Standard Battery**

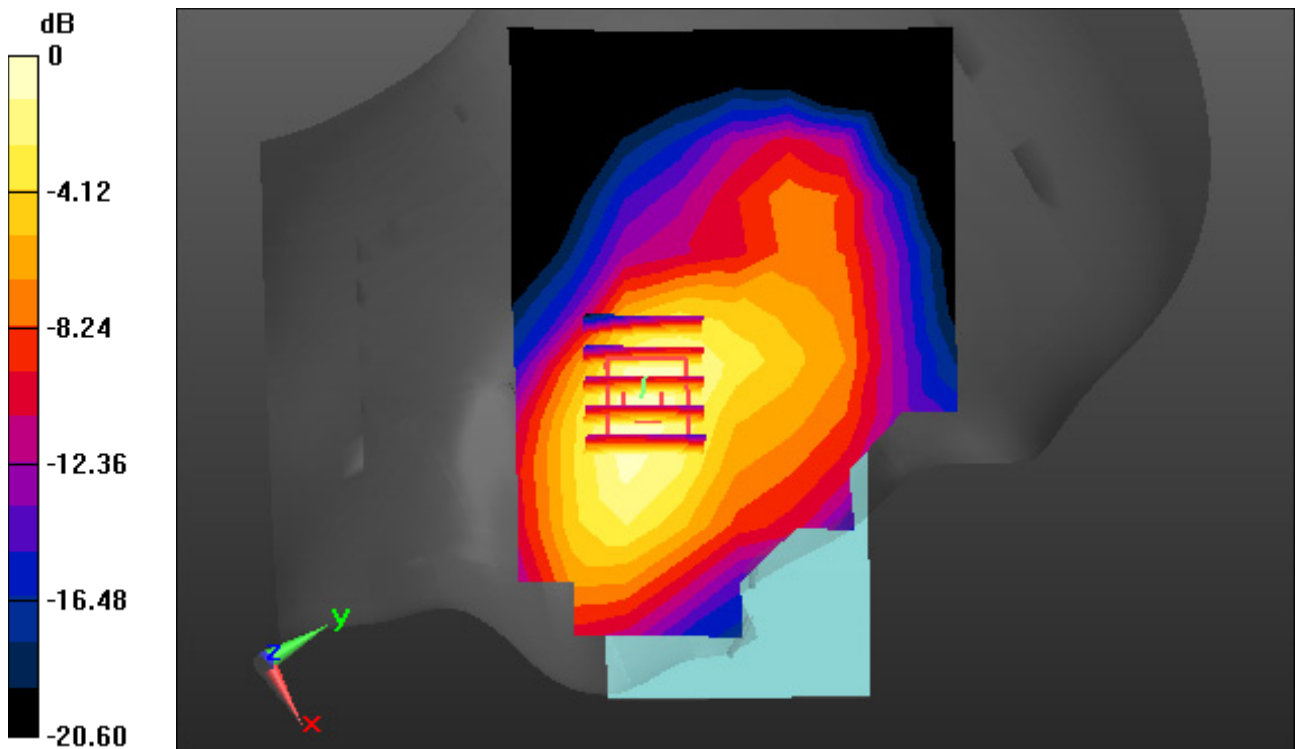
**Area Scan (9x14x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.573 W/kg

SAR(1 g) = 0.358 W/kg; SAR(10 g) = 0.216 W/kg



0 dB = 0.432 W/kg

## DT&C Co., Ltd.

**DUT: HA81; Type: Bar**

Communication System: UID 0, PCS1900\_Class 10(0); Frequency: 1880 MHz; Duty Cycle: 1:4.15

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.39$  S/m;  $\epsilon_r = 39.798$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(5.26, 5.26, 5.26); Calibrated: 3/21/2018; Electronics: DAE4 Sn1394

Sensor-Surface: 3mm (Mechanical Surface Detection)

Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-01; Ambient Temp: 21.4; Tissue Temp: 21.7

**Left Touch, GPRS1900 2Tx Ch. 661, Ant Internal, Standard Battery**

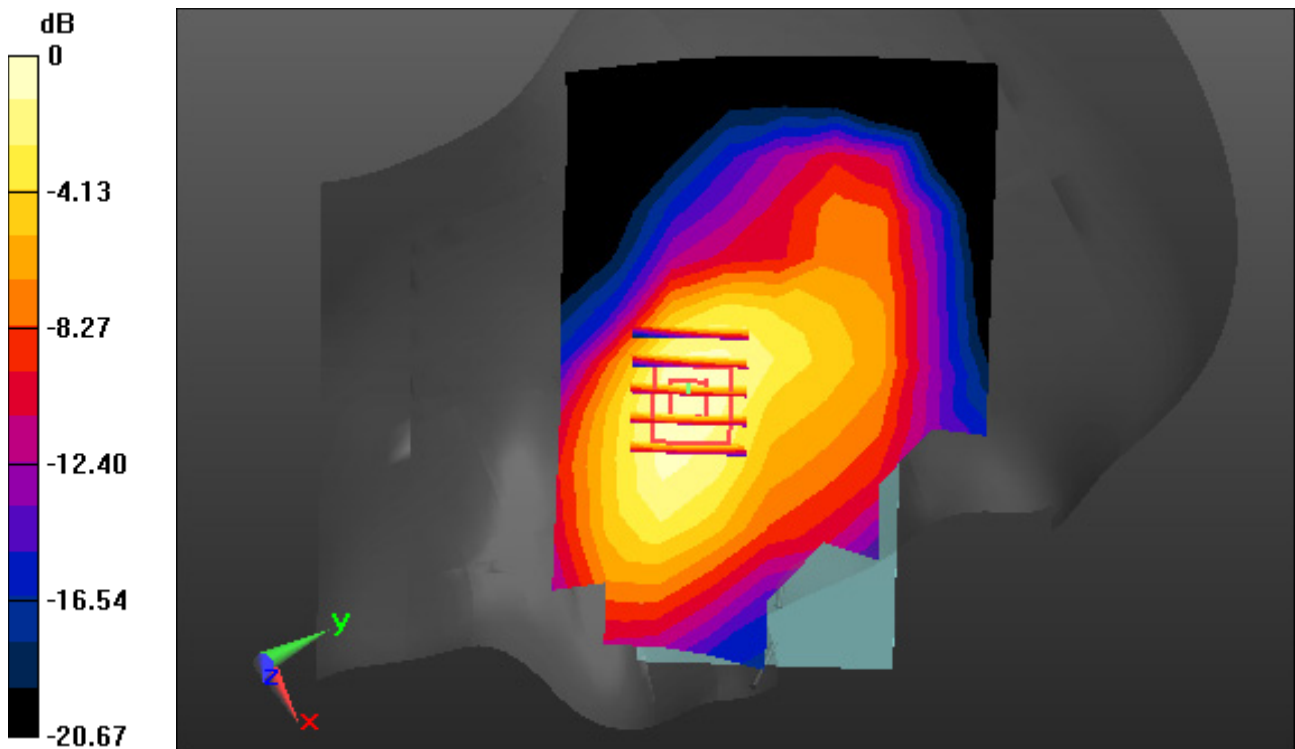
**Area Scan (9x14x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.607 W/kg

SAR(1 g) = 0.370 W/kg; SAR(10 g) = 0.225 W/kg



0 dB = 0.435 W/kg

## DT&C Co., Ltd.

### **DUT: HA81; Type: Bar**

Communication System: UID 0, WCDMA Band 4 (0); Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1732.4$  MHz;  $\sigma = 1.325$  S/m;  $\epsilon_r = 40.343$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

#### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(5.56, 5.56, 5.56); Calibrated: 3/21/2018; Electronics: DAE4 Sn1394

Sensor-Surface: 3mm (Mechanical Surface Detection)

Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-08; Ambient Temp: 21.6; Tissue Temp: 21.8

### **Left Touch, WCDMA Band 4 Ch. 1412, Ant Internal, Standard Battery**

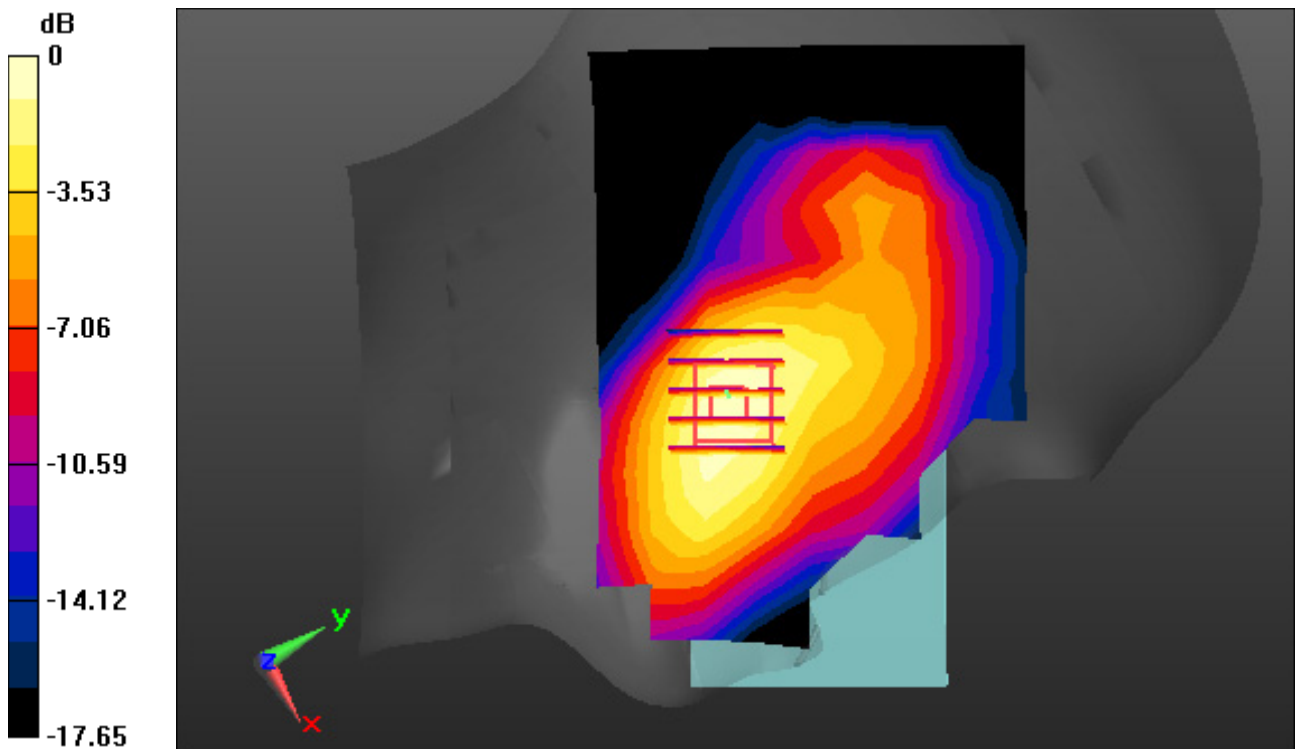
**Area Scan (9x14x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.658 W/kg

SAR(1 g) = 0.441 W/kg; SAR(10 g) = 0.284 W/kg



0 dB = 0.516 W/kg

## DT&C Co., Ltd.

**DUT: HA81; Type: Bar**

Communication System: UID 0, WCDMA 1900 (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.39$  S/m;  $\epsilon_r = 39.798$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(5.26, 5.26, 5.26); Calibrated: 3/21/2018; Electronics: DAE4 Sn1394

Sensor-Surface: 3mm (Mechanical Surface Detection)

Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-01; Ambient Temp: 21.4; Tissue Temp: 21.7

**Left Touch, WCDMA Band 2 Ch. 9400, Ant Internal, Standard Battery**

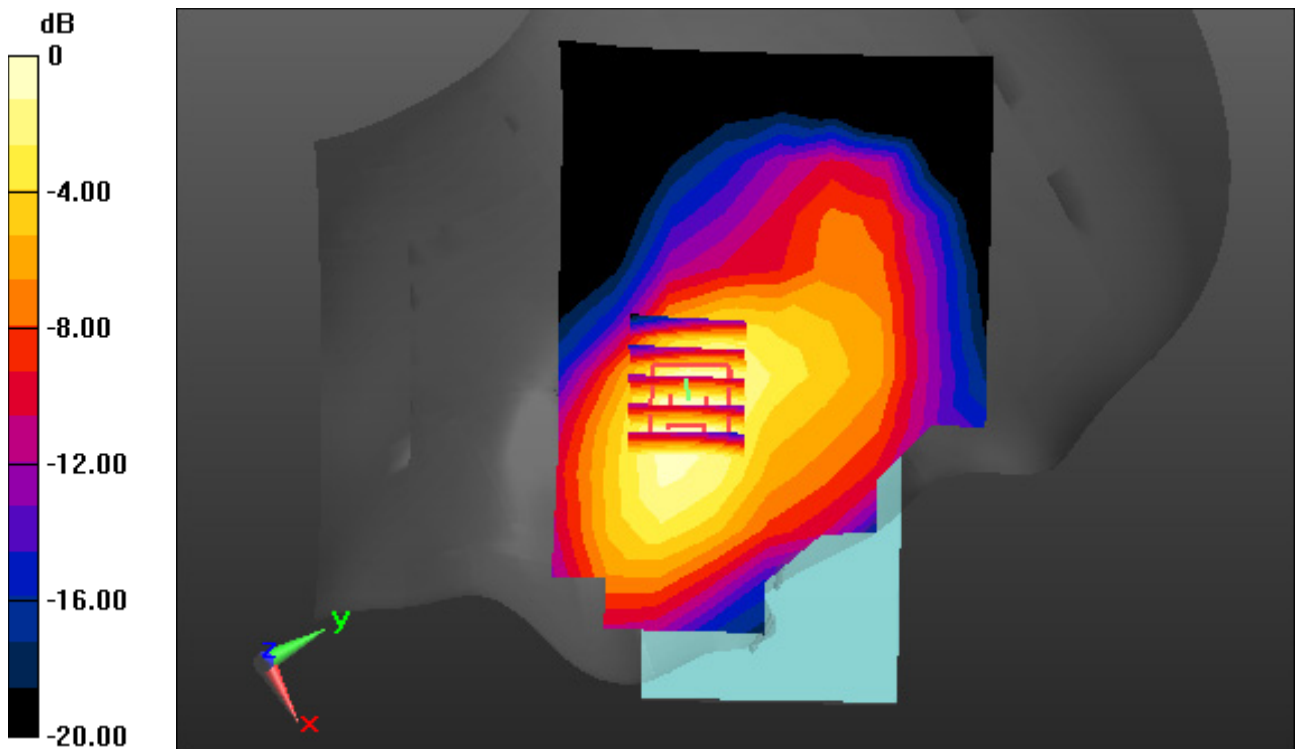
**Area Scan (9x14x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.917 W/kg

SAR(1 g) = 0.587 W/kg; SAR(10 g) = 0.361 W/kg



0 dB = 0.693 W/kg

## DT&C Co., Ltd.

**DUT: HA81; Type: Bar**

Communication System: UID 0, LTE Band 4 (FCC) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1732.5$  MHz;  $\sigma = 1.331$  S/m;  $\epsilon_r = 40.609$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Left Section

### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(5.56, 5.56, 5.56); Calibrated: 3/21/2018; Electronics: DAE4 Sn1394  
Sensor-Surface: 3mm (Mechanical Surface Detection)  
Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679  
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-10; Ambient Temp: 21.4; Tissue Temp: 21.5

**Left Touch, LTE Band 4 Ch. 20175, Ant Internal, Standard Battery**

**Mode : BandWidth 20 MHz, QPSK, RB Size : 1**

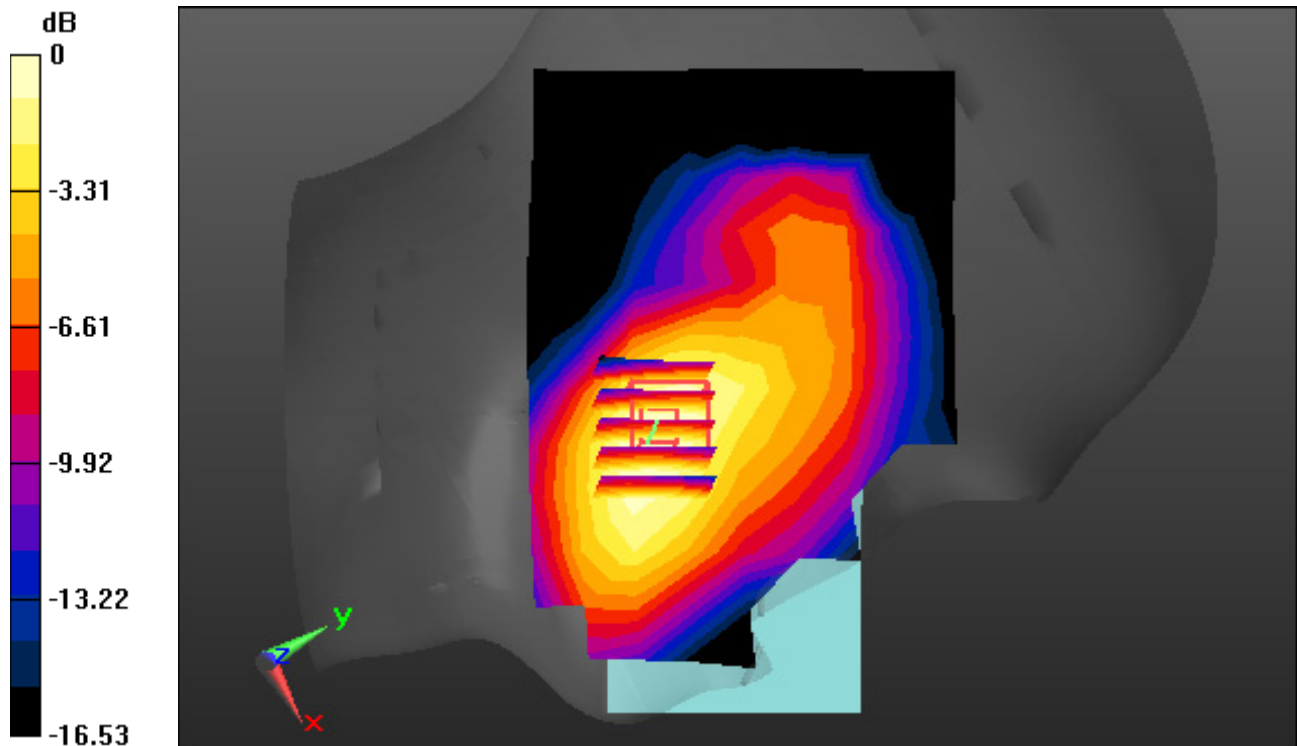
**Area Scan (9x14x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.895 W/kg

**SAR(1 g) = 0.596 W/kg; SAR(10 g) = 0.384 W/kg**



0 dB = 0.683 W/kg

## DT&C Co., Ltd.

### **DUT: HA81; Type: Bar**

Communication System: UID 0, LTE Band 2 (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.392$  S/m;  $\epsilon_r = 39.838$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

#### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(5.26, 5.26, 5.26); Calibrated: 3/21/2018; Electronics: DAE4 Sn1394

Sensor-Surface: 3mm (Mechanical Surface Detection)

Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-03; Ambient Temp: 21.2; Tissue Temp: 21.5

### **Left Touch, LTE Band 2 Ch. 18900, Ant Internal, Standard Battery**

**Mode : BandWidth 20 MHz, QPSK, RB Size : 1**

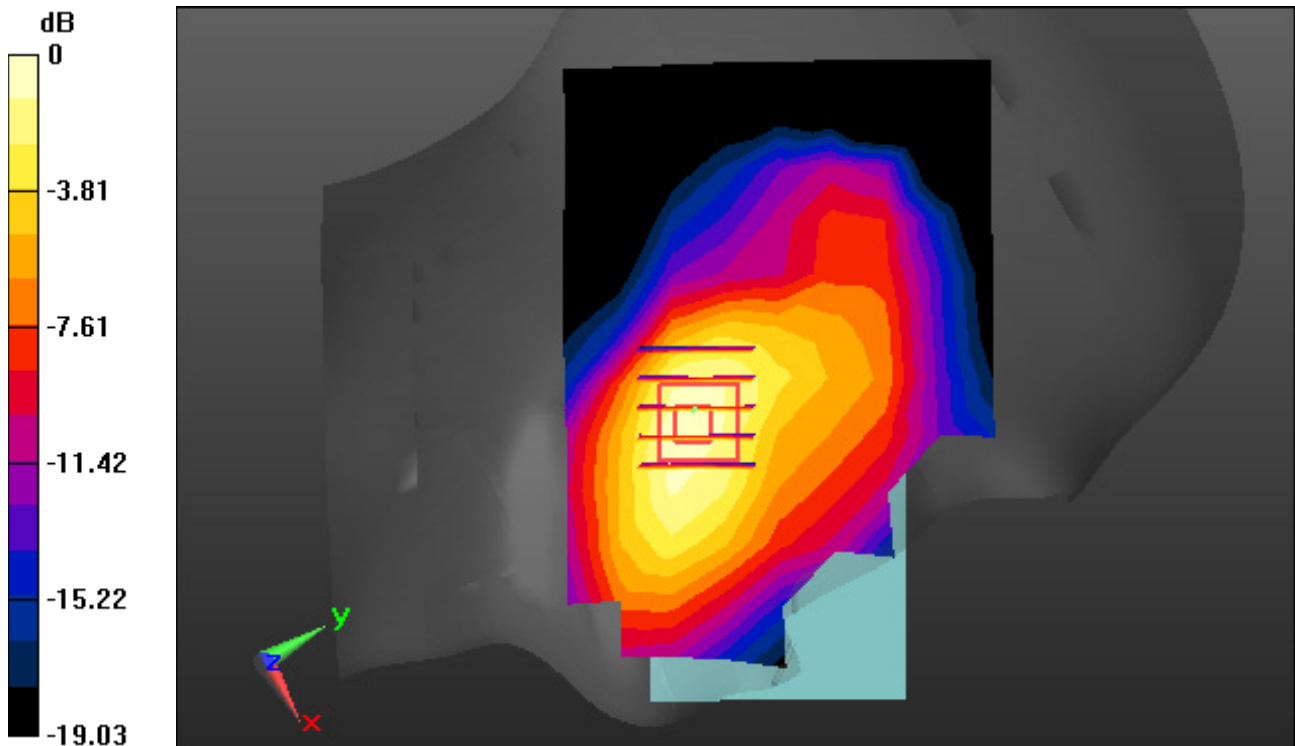
**Area Scan (9x14x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = 0.17 dB

Peak SAR (extrapolated) = 1.17 W/kg

**SAR(1 g) = 0.740 W/kg; SAR(10 g) = 0.446 W/kg**



0 dB = 0.884 W/kg

## DT&C Co., Ltd.

**DUT: HA81; Type: Bar**

Communication System: UID 0, W-LAN (0); Frequency: 2412 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 2412 \text{ MHz}$ ;  $\sigma = 1.799 \text{ S/m}$ ;  $\epsilon_r = 38.353$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(4.82, 4.82, 4.82); Calibrated: 2018-03-21; Electronics: DAE4 Sn1394  
Sensor-Surface: 3mm (Mechanical Surface Detection)  
Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679  
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-14; Ambient Temp: 21.8; Tissue Temp: 21.9

**Left Touch, W-LAN(802.11b) Ch. 1, Ant Internal, Standard Battery**

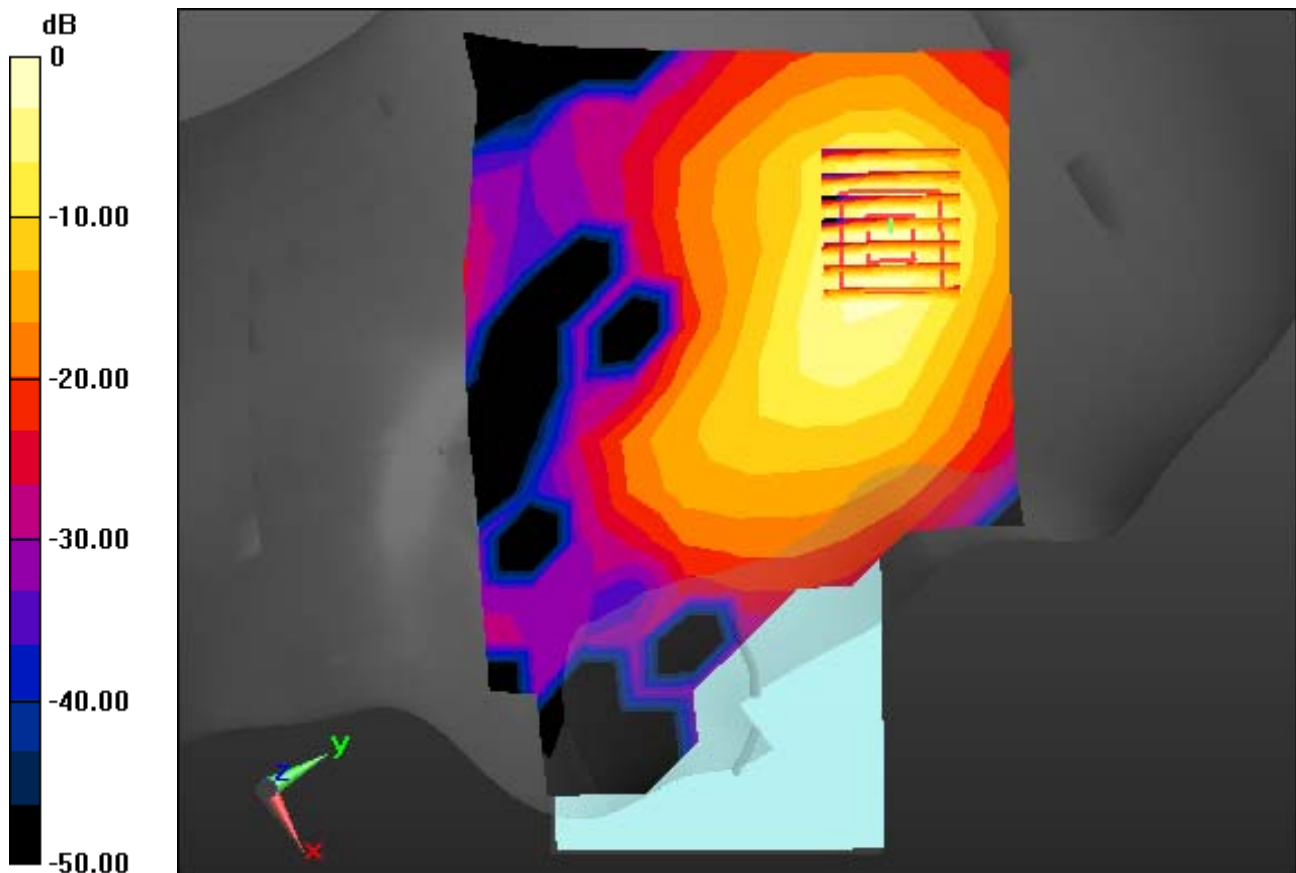
**Area Scan (11x17x1):** Measurement grid:  $dx=12\text{mm}$ ,  $dy=12\text{mm}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Power Drift = 0.13 dB

Peak SAR (extrapolated) = 1.43 W/kg

**SAR(1 g) = 0.612 W/kg; SAR(10 g) = 0.264 W/kg**



0 dB = 0.840 W/kg

## DT&C Co., Ltd.

### **DUT: HA81; Type: Bar**

Communication System: UID 0, PCS 1900 (0); Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.519$  S/m;  $\epsilon_r = 51.639$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

#### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(4.88, 4.88, 4.88); Calibrated: 3/21/2018; Electronics: DAE4 Sn1394

Sensor-Surface: 3mm (Mechanical Surface Detection)

Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-02; Ambient Temp: 21.6; Tissue Temp: 21.8

### **1 cm space from Body, Front, PCS1900 Ch. 661, Ant. Internal**

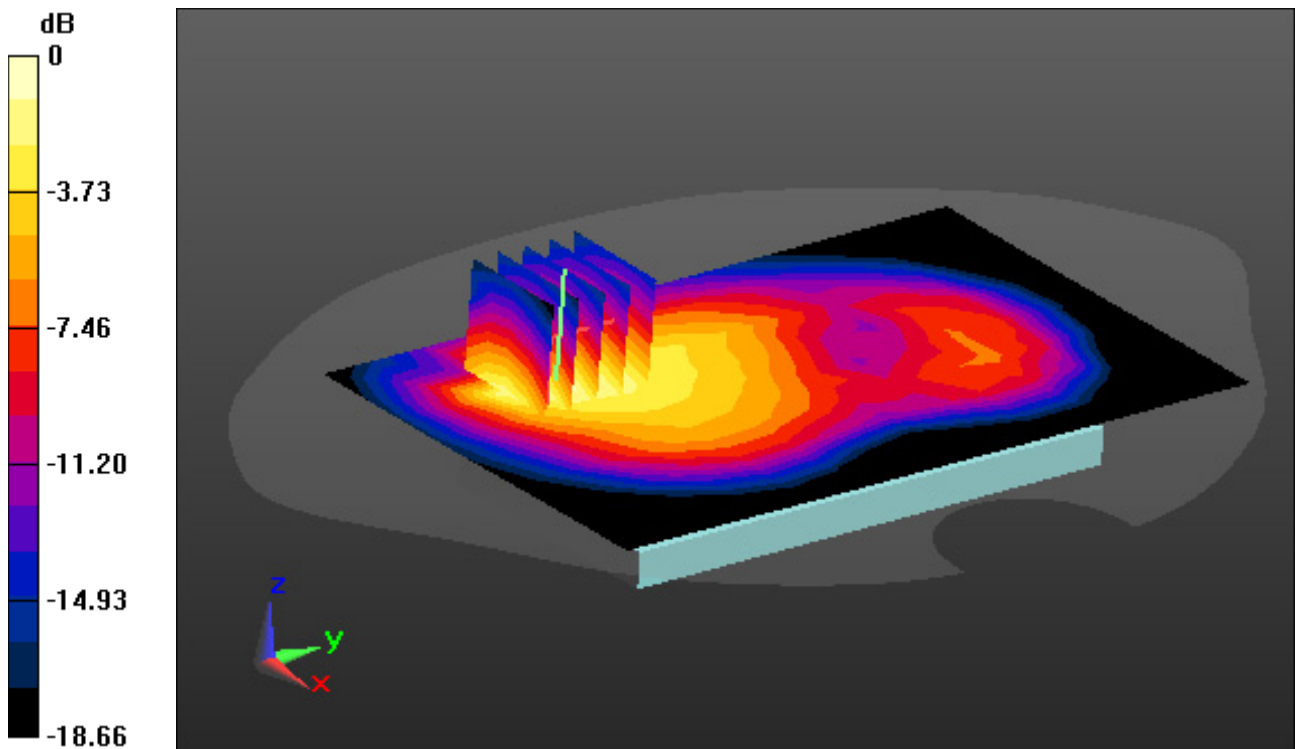
**Area Scan (9x14x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.853 W/kg

**SAR(1 g) = 0.485 W/kg; SAR(10 g) = 0.263 W/kg**



0 dB = 0.586 W/kg

## DT&C Co., Ltd.

**DUT: HA81; Type: Bar**

Communication System: UID 0, PCS1900\_Class 10 (0); Frequency: 1880 MHz; Duty Cycle: 1:4.15

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.519$  S/m;  $\epsilon_r = 51.639$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(4.88, 4.88, 4.88); Calibrated: 3/21/2018; Electronics: DAE4 Sn1394

Sensor-Surface: 3mm (Mechanical Surface Detection)

Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-02; Ambient Temp: 21.6; Tissue Temp: 21.8

**1 cm space from Body, Front, GPRS1900 2Tx Ch. 661, Ant. Internal**

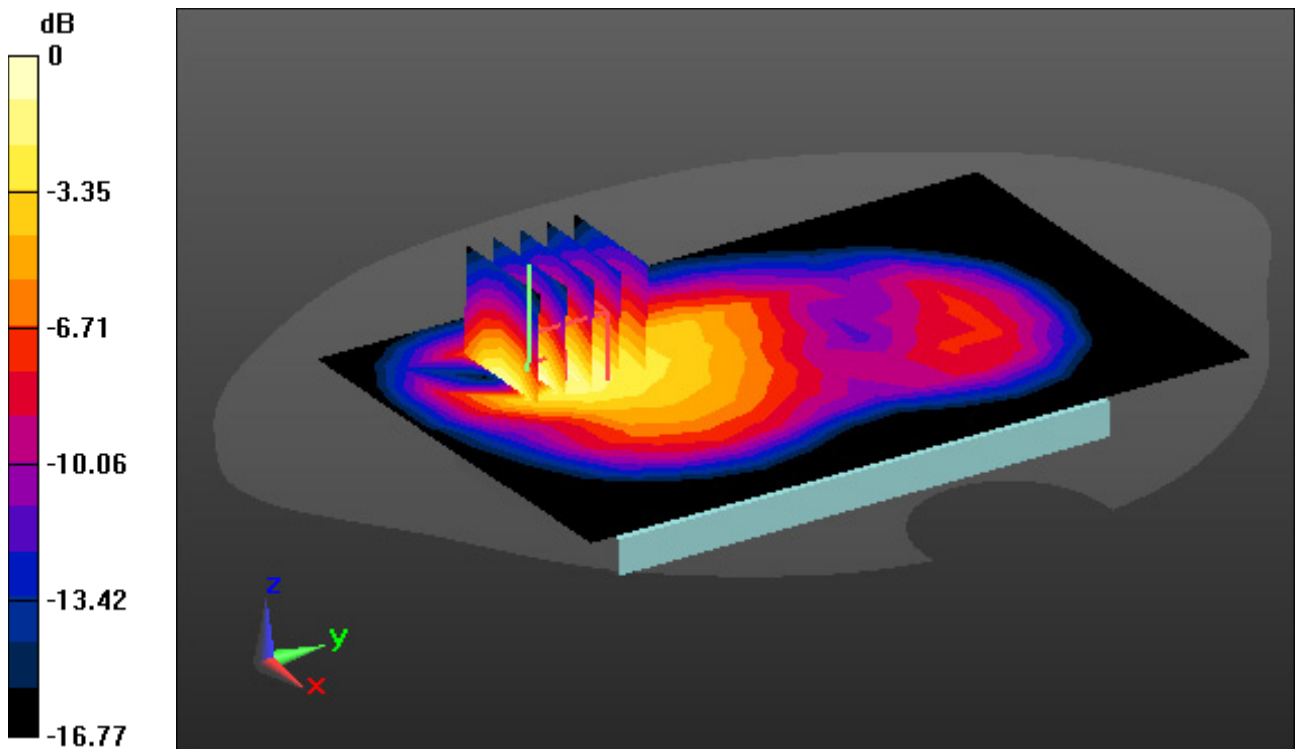
**Area Scan (9x14x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.812 W/kg

**SAR(1 g) = 0.494 W/kg; SAR(10 g) = 0.278 W/kg**



0 dB = 0.598 W/kg

## DT&C Co., Ltd.

### **DUT: HA81; Type: Bar**

Communication System: UID 0, WCDMA Band 4 (0); Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1732.4$  MHz;  $\sigma = 1.475$  S/m;  $\epsilon_r = 51.568$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

#### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(5.1, 5.1, 5.1); Calibrated: 3/21/2018; Electronics: DAE4 Sn1394

Sensor-Surface: 3mm (Mechanical Surface Detection)

Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-09; Ambient Temp: 21.7; Tissue Temp: 22.1

### **1 cm space from Body, Front, WCDMA Band 2 Ch. 1412, Ant. Internal**

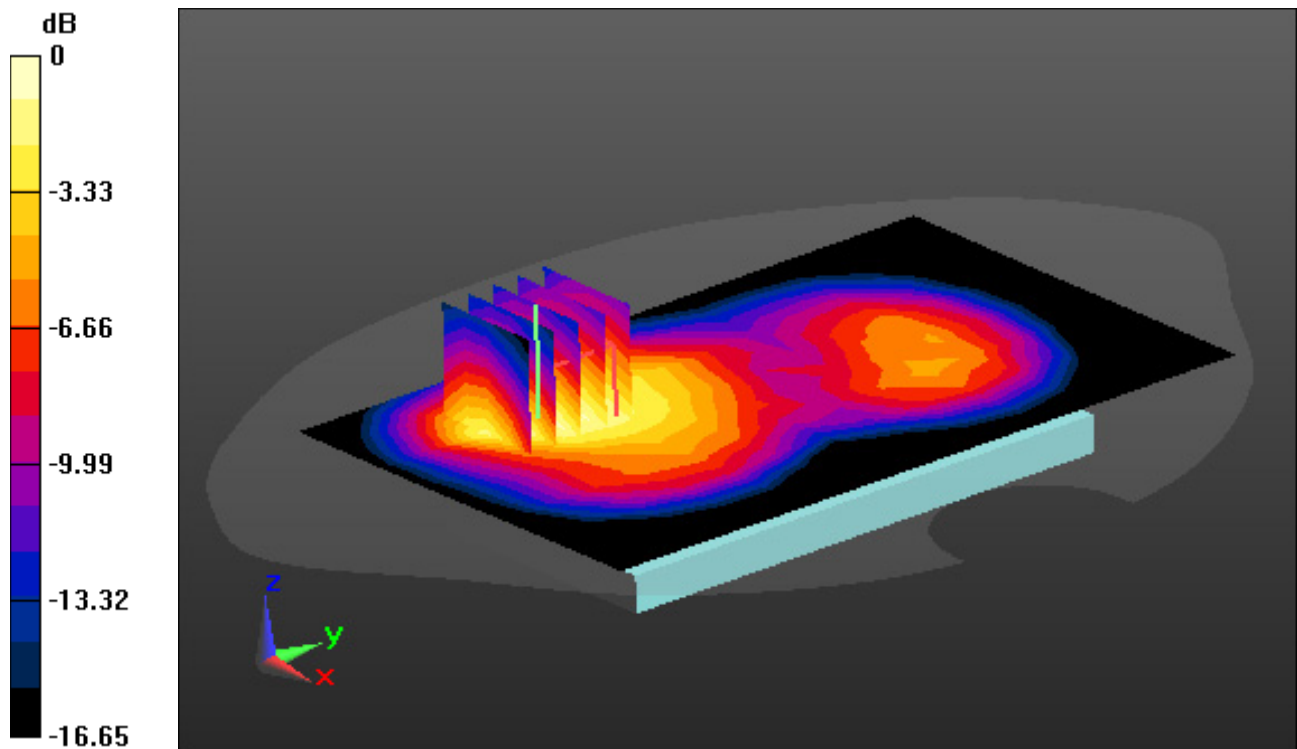
**Area Scan (9x14x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.944 W/kg

**SAR(1 g) = 0.605 W/kg; SAR(10 g) = 0.366 W/kg**



0 dB = 0.717 W/kg

## DT&C Co., Ltd.

**DUT: HA81; Type: Bar**

Communication System: UID 0, WCDMA 1900 (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.519$  S/m;  $\epsilon_r = 51.639$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(4.88, 4.88, 4.88); Calibrated: 3/21/2018; Electronics: DAE4 Sn1394

Sensor-Surface: 3mm (Mechanical Surface Detection)

Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-02; Ambient Temp: 21.6; Tissue Temp: 21.8

**1 cm space from Body, Front, WCDMA Band 2 Ch. 9400, Ant. Internal**

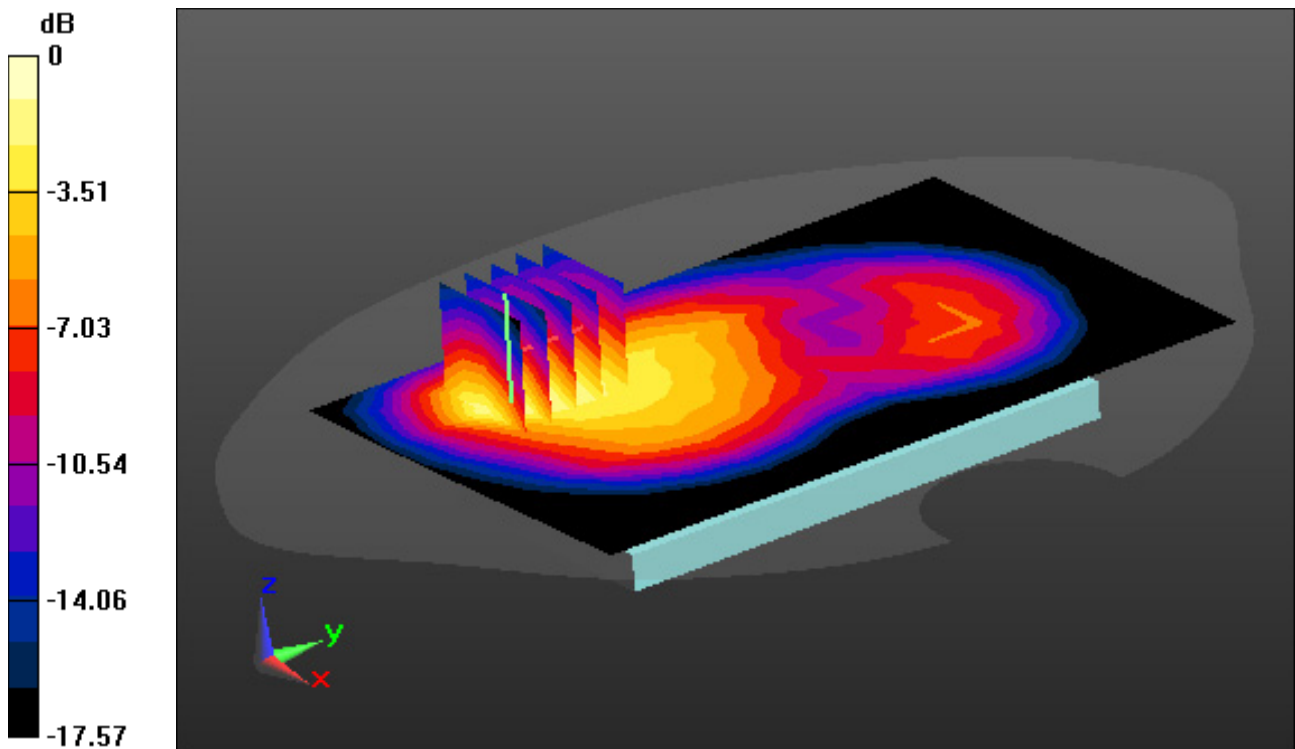
**Area Scan (9x14x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = 0.14 dB

Peak SAR (extrapolated) = 1.16 W/kg

**SAR(1 g) = 0.684 W/kg; SAR(10 g) = 0.379 W/kg**



0 dB = 0.811 W/kg

## DT&C Co., Ltd

**DUT: HA81; Type: Bar**

Communication System: UID 0, LTE Band 4 (FCC) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1732.5$  MHz;  $\sigma = 1.482$  S/m;  $\epsilon_r = 52.021$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section

### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(5.1, 5.1, 5.1); Calibrated: 3/21/2018; Electronics: DAE4 Sn1394  
Sensor-Surface: 3mm (Mechanical Surface Detection)  
Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679  
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-11; Ambient Temp: 21.3; Tissue Temp: 21.5

**1 cm space from Body, Front, LTE Band 4 Ch. 20175, Ant Internal**

**Mode : BandWidth 20 MHz, QPSK, RB Size : 1**

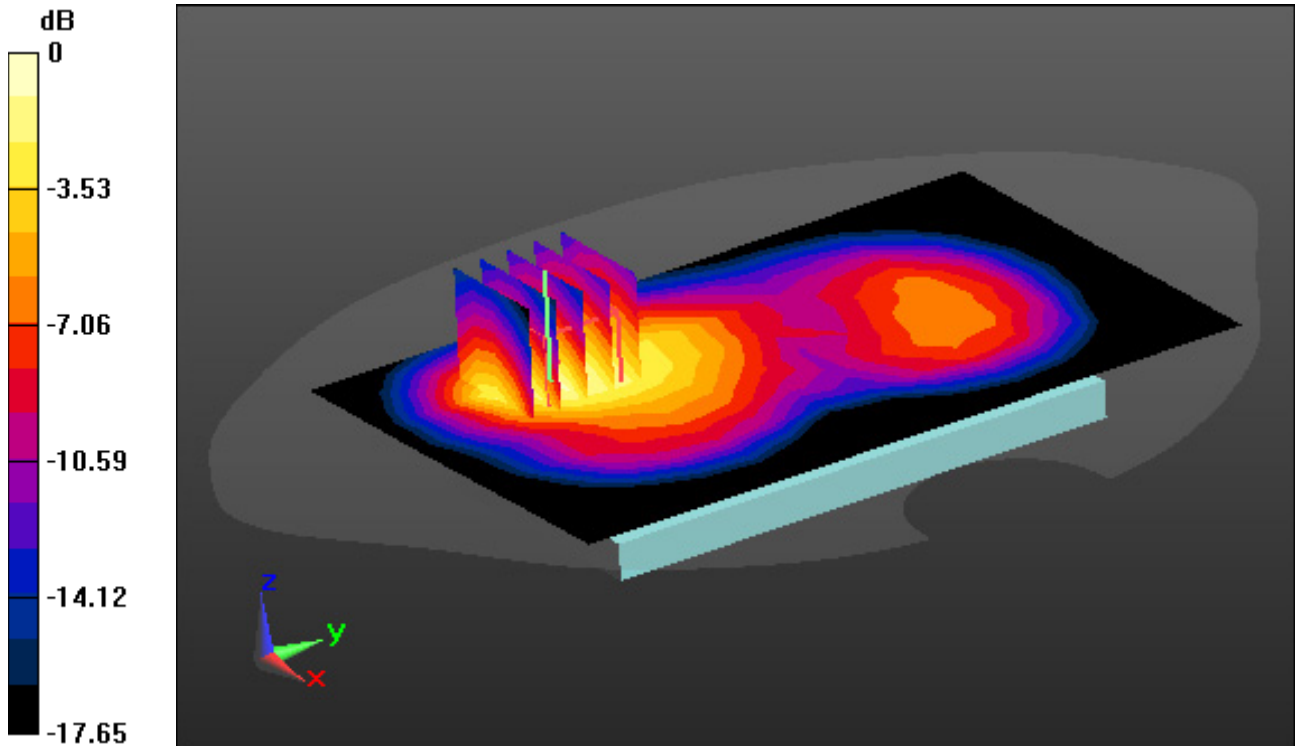
**Area Scan (9x14x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.40 W/kg

**SAR(1 g) = 0.871 W/kg; SAR(10 g) = 0.510 W/kg**



0 dB = 1.05 W/kg

## DT&C Co., Ltd

### **DUT: HA81; Type: Bar**

Communication System: UID 0, LTE Band 2 (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.513$  S/m;  $\epsilon_r = 51.802$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

#### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(4.88, 4.88, 4.88); Calibrated: 3/21/2018; Electronics: DAE4 Sn1394

Sensor-Surface: 3mm (Mechanical Surface Detection)

Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-04; Ambient Temp: 21.8; Tissue Temp: 22.1

### **1 cm space from Body, Front, LTE Band 2 Ch. 18900, Ant Internal**

#### **Mode : BandWidth 20 MHz, QPSK, RB Size : 1**

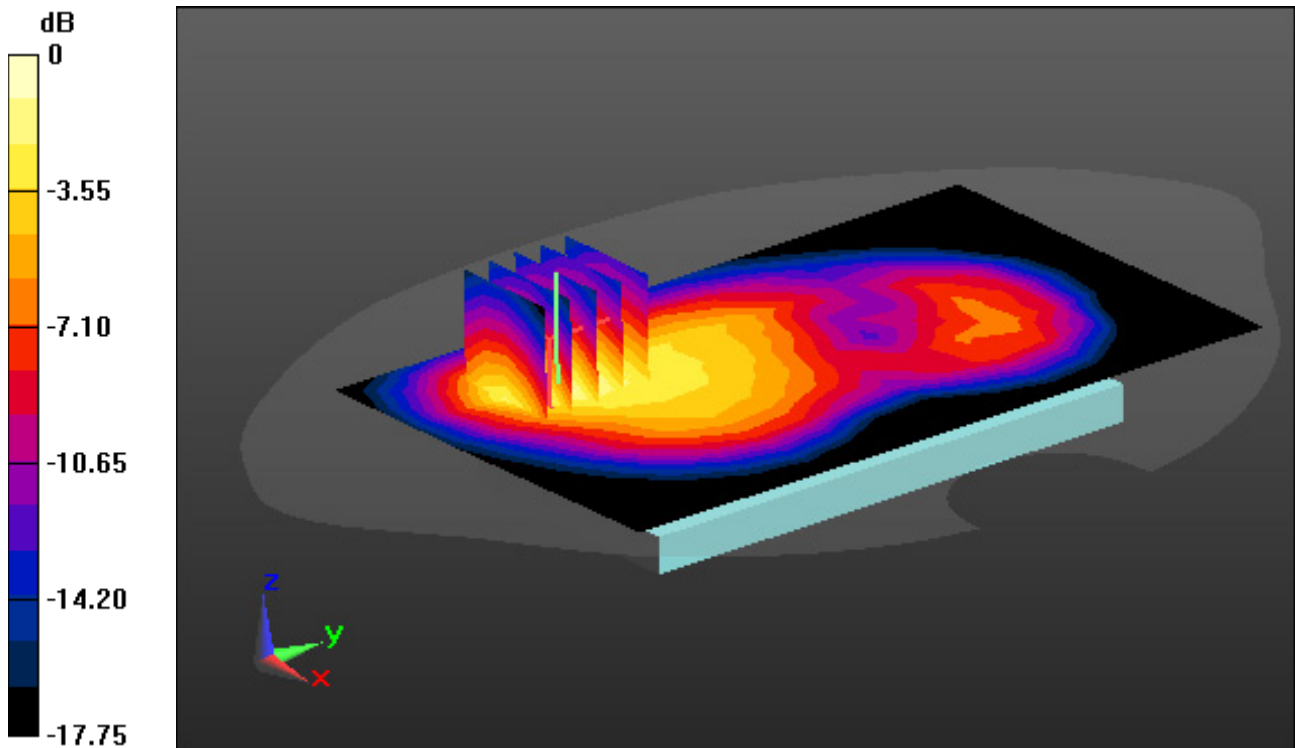
**Area Scan (9x14x1):** Measurement grid: dx=15mm, dy=15mm

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

Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.34 W/kg

**SAR(1 g) = 0.806 W/kg; SAR(10 g) = 0.445 W/kg**



0 dB = 0.969 W/kg

## DT&C Co., Ltd.

### **DUT: HA81; Type: Bar**

Communication System: UID 0, W-LAN (0); Frequency: 2412 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 2412 \text{ MHz}$ ;  $\sigma = 1.846 \text{ S/m}$ ;  $\epsilon_r = 52.675$ ;  $\rho = 1000 \text{ kg/m}^3$   
Phantom section: Flat Section

#### **DASY5 Configuration:**

Probe: ES3DV3 - SN3328; ConvF(4.48, 4.48, 4.48); Calibrated: 3/21/2018; Electronics: DAE4 Sn1394  
Sensor-Surface: 3mm (Mechanical Surface Detection)  
Phantom: Twin-SAM V5.0 ; Type: QD 000 P40 CD; Serial: 1679  
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Test Date: 2018-05-15; Ambient Temp: 21.5; Tissue Temp: 21.8

### **1 cm space from Body, Rear, WLAN(802.11b) Ch. 1, Ant. Internal**

**Area Scan (11x17x1):** Measurement grid:  $dx=12\text{mm}$ ,  $dy=12\text{mm}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.164 W/kg

**SAR(1 g) = 0.075 W/kg; SAR(10 g) = 0.033 W/kg**

