

## APPENDIX B: SYSTEM VERIFICATION PLOTS

# PCTEST

**DUT: Dipole 6500.0 MHz; Type: D6.5GHzV2 - SN1018**

Communication System: UID: 0, CW; Frequency: 6500.0 MHz

Medium: 6000 Head; Medium parameters used:

f = 6500.0 MHz; cond = 6.02 S/m; perm = 32.2; density = 1000 kg/m<sup>3</sup>

Phantom Section: Flat; Space: 5 mm

Test Date: 05/28/2021; Ambient Temp: 23.6°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7570; ConvF:(5.4,5.4,5.4); Calibrated: 2020-12-15

Sensor-Surface: 1.4mm (VMS + 6p)

Electronics: DAE4 Sn859; Calibrated: 2020-12-07

Phantom: Twin-SAM V8.0 Right; Serial: 1981

Measurement SW: cDASY6 Module SAR V6.14.0.959

## 6500.0 MHz System Verification at 17.0 dBm

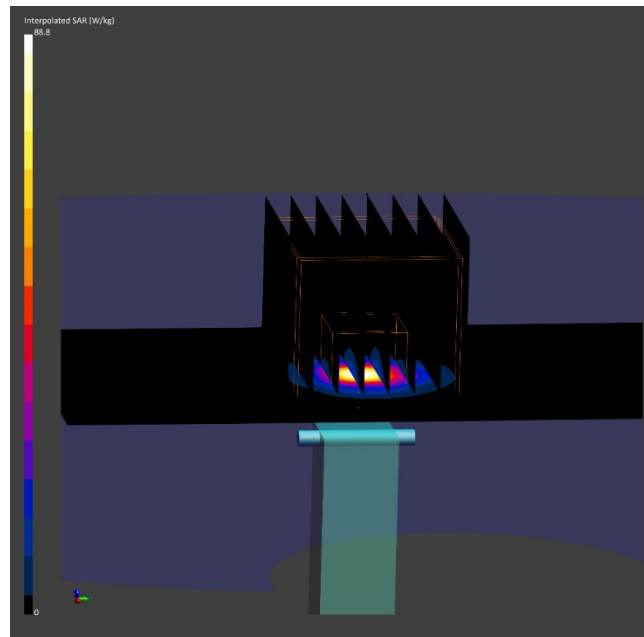
**Area Scan (51.0 x 85.0):** Measurement grid: dx=8.5mm, dy=8.5mm

**Zoom Scan (22.0 x 22.0 x 22.0):** Measurement grid: dx=3.4mm, dy=3.4mm, dz=1.4mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 88.8 W/kg

**SAR(1 g) = 14.1 W/kg; SAR(10 g) = 2.63 W/kg; APD (4 cm<sup>2</sup>) = 65.7 W/m<sup>2</sup>**

Deviation (1 g) = -3.42%; Deviation (10 g) = -2.23%; Deviation (4 cm<sup>2</sup>) = -2.67%



# PCTEST

**DUT: Dipole 6500.0 MHz; Type: D6.5GHzV2 - SN1018**

Communication System: UID: 0, CW; Frequency: 6500.0 MHz

Medium: 6000 Head; Medium parameters used:

f = 6500.0 MHz; cond = 6.22 S/m; perm = 34.6; density = 1000 kg/m<sup>3</sup>

Phantom Section: Flat; Space: 5 mm

Test Date: 05/31/2021; Ambient Temp: 21.5°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7570; ConvF:(5.4,5.4,5.4); Calibrated: 2020-12-15

Sensor-Surface: 1.4mm (VMS + 6p)

Electronics: DAE4 Sn859; Calibrated: 2020-12-07

Phantom: Twin-SAM V8.0 Right; Serial: 1981

Measurement SW: cDASY6 Module SAR V6.14.0.959

## 6500.0 MHz System Verification at 17.0 dBm

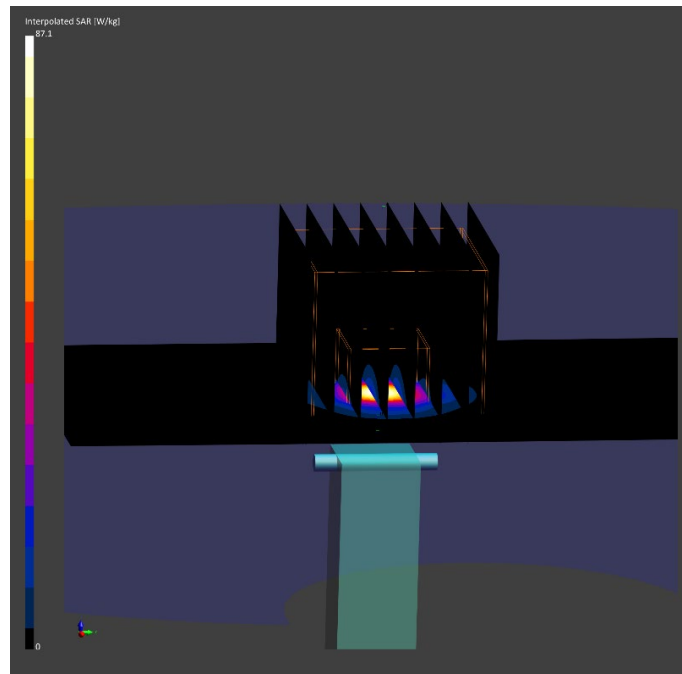
**Area Scan (51.0 x 85.0):** Measurement grid: dx=8.5mm, dy=8.5mm

**Zoom Scan (22.0 x 22.0 x 22.0):** Measurement grid: dx=3.4mm, dy=3.4mm, dz=1.4mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 87.1 W/kg

**SAR(1 g) = 13.9 W/kg; SAR(10 g) = 2.55 W/kg; APD (4 cm<sup>2</sup>) = 63.8 W/m<sup>2</sup>**

Deviation (1 g) = -4.79%; Deviation (10 g) = -5.20%; Deviation (4 cm<sup>2</sup>) = -5.48%



# PCTEST

Date: 05/26/2021

## 10 GHz System Verification

### Device Under Test Properties

| DUT                        | Serial Number |
|----------------------------|---------------|
| 10 GHz Verification Source | 1004          |

### Exposure Conditions

| Phantom Section | Position | Test Distance [mm] | Band            | Frequency [MHz] |
|-----------------|----------|--------------------|-----------------|-----------------|
| 5G              | FRONT    | 10.00              | Validation band | 10000.0         |

### Hardware Setup

| Probe, Calibration Date      | DAE, Calibration Date  |
|------------------------------|------------------------|
| EUmmWV3 - SN9389, 11/16/2020 | DAE4 SN1582 04/07/2021 |

### Software Setup

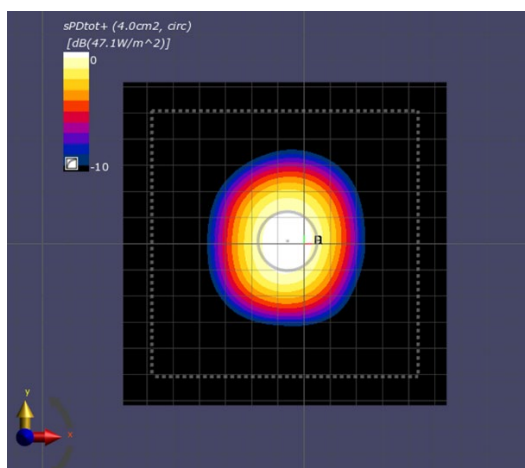
| Software             | Software Version |
|----------------------|------------------|
| cDASY6 Module mmWave | 2.2.0.76         |

### Scans Setup

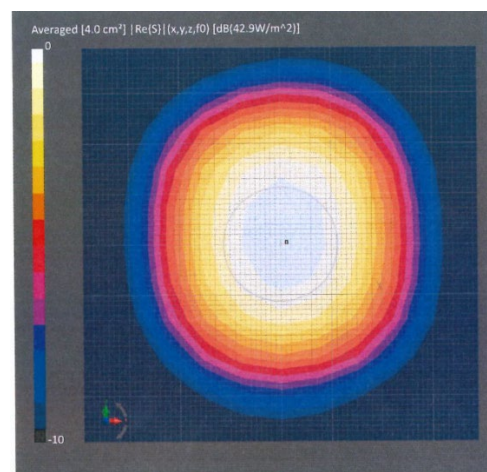
|                     |             |
|---------------------|-------------|
| Scan Type           | 5G Scan     |
| Grid Extents [mm]   | 120 x 120   |
| Grid Steps [lambda] | 0.25 x 0.25 |
| Sensor Surface [mm] | 10.00       |

### Measurement Results

|                                           |         |
|-------------------------------------------|---------|
| Scan Type                                 | 5G Scan |
| Avg. Area [cm <sup>2</sup> ]              | 4.00    |
| pS <sub>tot</sub> avg [W/m <sup>2</sup> ] | 47.1    |
| pS <sub>n</sub> avg [W/m <sup>2</sup> ]   | 46.8    |
| E <sub>peak</sub> [V/m]                   | 141     |
| Deviation (dB)                            | 0.41    |



10 GHz System Verification



Calibration Certificate

# PCTEST

Date: 05/26/2021

## 10 GHz System Verification

### Device Under Test Properties

| DUT                        | Serial Number |
|----------------------------|---------------|
| 10 GHz Verification Source | 1004          |

### Exposure Conditions

| Phantom Section | Position | Test Distance [mm] | Band            | Frequency [MHz] |
|-----------------|----------|--------------------|-----------------|-----------------|
| 5G              | FRONT    | 10.00              | Validation band | 10000.0         |

### Hardware Setup

| Probe, Calibration Date      | DAE, Calibration Date   |
|------------------------------|-------------------------|
| EUmmWV4 - SN9523, 01/11/2021 | DAE4 SN1368, 03/10/2021 |

### Software Setup

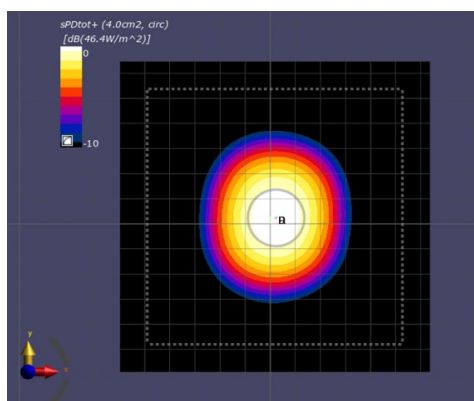
| Software             | Software Version |
|----------------------|------------------|
| cDASY6 Module mmWave | 2.2.0.76         |

### Scans Setup

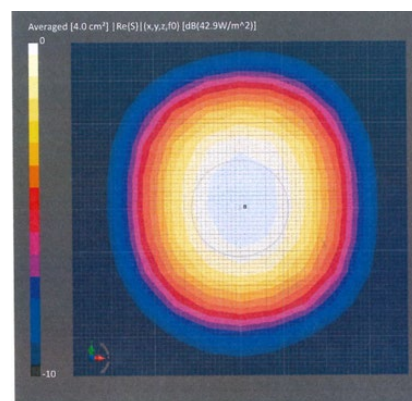
|                     |             |
|---------------------|-------------|
| Scan Type           | 5G Scan     |
| Grid Extents [mm]   | 120 x 120   |
| Grid Steps [lambda] | 0.25 x 0.25 |
| Sensor Surface [mm] | 10.00       |

### Measurement Results

|                                           |         |
|-------------------------------------------|---------|
| Scan Type                                 | 5G Scan |
| Avg. Area [cm <sup>2</sup> ]              | 4.00    |
| pS <sub>tot</sub> avg [W/m <sup>2</sup> ] | 46.4    |
| pS <sub>n</sub> avg [W/m <sup>2</sup> ]   | 46.2    |
| E <sub>peak</sub> [V/m]                   | 139     |
| Deviation (dB)                            | 0.34    |



10 GHz System Verification



Calibration Certificate