

## Modulation signal verification Data

### Modulation signal verification for EX3DV4 SN:3873

Frequency (MHz)	Modulation	Conductivity ( $\sigma$ )	Permittivity ( $\epsilon_r$ )	Conductivity Target ( $\sigma$ )	Permittivity Target ( $\epsilon_r$ )	Delta ( $\sigma$ ) (%)	Delta ( $\epsilon_r$ ) (%)	Measured SAR (W/kg)	Input Power (W)	1W Normalized SAR (W/kg)	1W Target SAR (W/kg)	Deviation (%)	Probe S/N
835	GMSK	0.9	40.574	0.90	41.5	0.00	-2.23	1.53	0.154	9.95	9.53	4.38	3873
835	QPSK	0.9	40.574	0.90	41.5	0.00	-2.23	1.51	0.166	9.08	9.53	-4.75	3873
1750	QPSK	1.384	38.482	1.37	40.10	1.02	-4.03	1.56	0.042	36.99	36.40	1.63	3873
1900	GMSK	1.443	40.23	1.40	40.0	3.07	0.57	1.66	0.042	39.52	39.00	1.34	3873
1900	QPSK	1.443	40.23	1.40	40.0	3.07	0.57	1.68	0.044	38.13	39.00	-2.22	3873
2600	QPSK	2.039	38.932	1.96	39.00	4.03	-0.17	1.62	0.030	54.00	56.30	-4.09	3873

## System Check\_Head\_835MHz\_200317\_GMSK

**DUT: Dipole:835 MHz;Type:D835V2**

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1

Medium: HSL835\_0317 Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.9 \text{ S/m}$ ;  $\epsilon_r = 40.574$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.5^\circ\text{C}$ ; Liquid Temperature :  $22.3^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.59, 9.59, 9.59); Calibrated: 2019/08/30;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 2019/08/28
- Phantom: Front Phantom with CRP v5.0; Type: QD000P40CD; Serial: TP:1695
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**-Area Scan (61x61x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) =  $1.96 \text{ W/kg}$

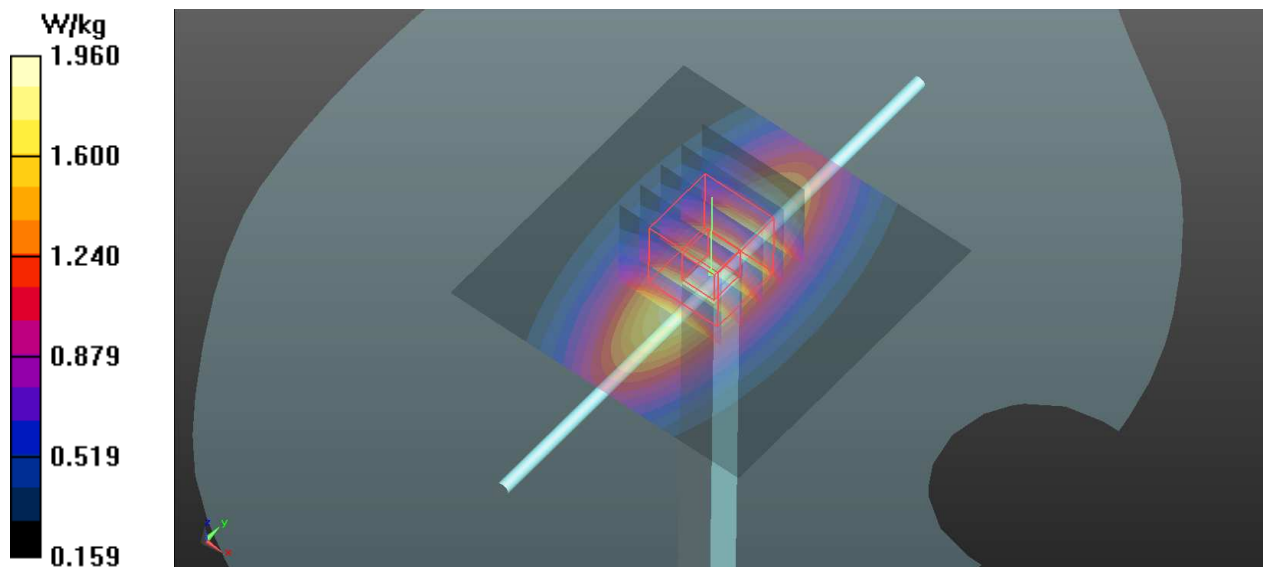
**-Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $43.00 \text{ V/m}$ ; Power Drift =  $-0.04 \text{ dB}$

Peak SAR (extrapolated) =  $2.32 \text{ W/kg}$

**SAR(1 g) =  $1.53 \text{ W/kg}$ ; SAR(10 g) =  $0.993 \text{ W/kg}$**

Maximum value of SAR (measured) =  $1.96 \text{ W/kg}$



## System Check\_Head\_835MHz\_200317\_QPSK

**DUT: Dipole:835 MHz;Type:D835V2**

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1

Medium: HSL835\_0317 Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.9 \text{ S/m}$ ;  $\epsilon_r = 40.574$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.5^\circ\text{C}$ ; Liquid Temperature :  $22.3^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.59, 9.59, 9.59); Calibrated: 2019/08/30;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 2019/08/28
- Phantom: Front Phantom with CRP v5.0; Type: QD000P40CD; Serial: TP:1695
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**-Area Scan (61x61x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) =  $1.94 \text{ W/kg}$

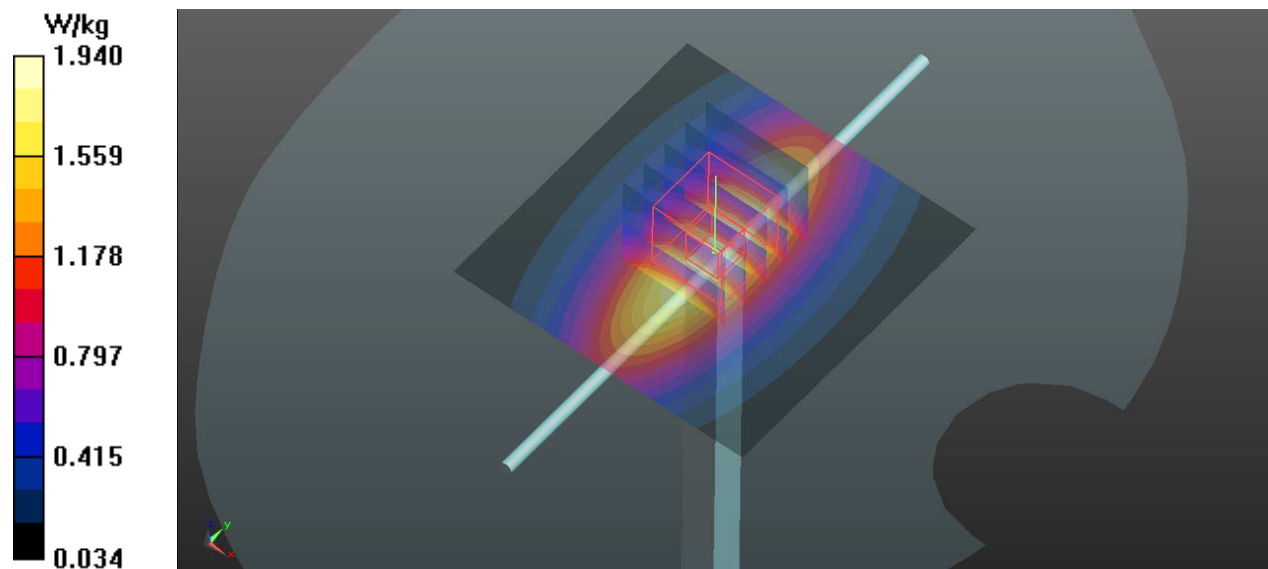
**-Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $42.85 \text{ V/m}$ ; Power Drift =  $-0.01 \text{ dB}$

Peak SAR (extrapolated) =  $2.29 \text{ W/kg}$

**SAR(1 g) =  $1.51 \text{ W/kg}$ ; SAR(10 g) =  $0.983 \text{ W/kg}$**

Maximum value of SAR (measured) =  $1.94 \text{ W/kg}$



## System Check\_Head\_1750MHz\_200319\_QPSK

**DUT: Dipole:1750 MHz;Type:D1750V2**

Communication System: CW; Frequency: 1750 MHz;Duty Cycle: 1:1

Medium: HSL1750\_0319 Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.384$  S/m;  $\epsilon_r = 38.482$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.2°C; Liquid Temperature : 22.1°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(8.25, 8.25, 8.25); Calibrated: 2019/08/30;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 2019/08/28
- Phantom: Front Phantom with CRP v5.0; Type: QD000P40CD; Serial: TP:1695
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**-Area Scan (61x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.25 W/kg

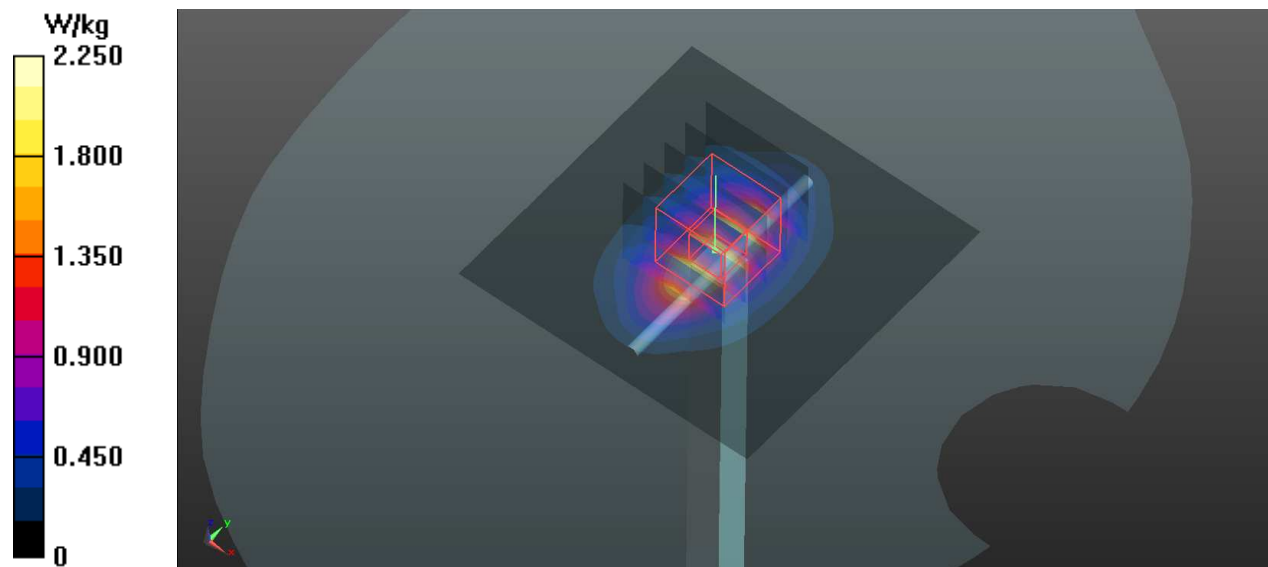
**-Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 35.54 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 2.89 W/kg

**SAR(1 g) = 1.56 W/kg; SAR(10 g) = 0.810 W/kg**

Maximum value of SAR (measured) = 2.26 W/kg



## System Check\_Head\_1900MHz\_200321\_GMSK

**DUT: Dipole:1900MHz;Type:D1900V2**

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1

Medium: HSL1900\_0321 Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.443 \text{ S/m}$ ;  $\epsilon_r = 40.23$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.6^\circ\text{C}$ ; Liquid Temperature :  $22.2^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.96, 7.96, 7.96); Calibrated: 2019/08/30;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 2019/08/28
- Phantom: Front Phantom with CRP v5.0; Type: QD000P40CD; Serial: TP:1695
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**-Area Scan (61x61x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) =  $2.39 \text{ W/kg}$

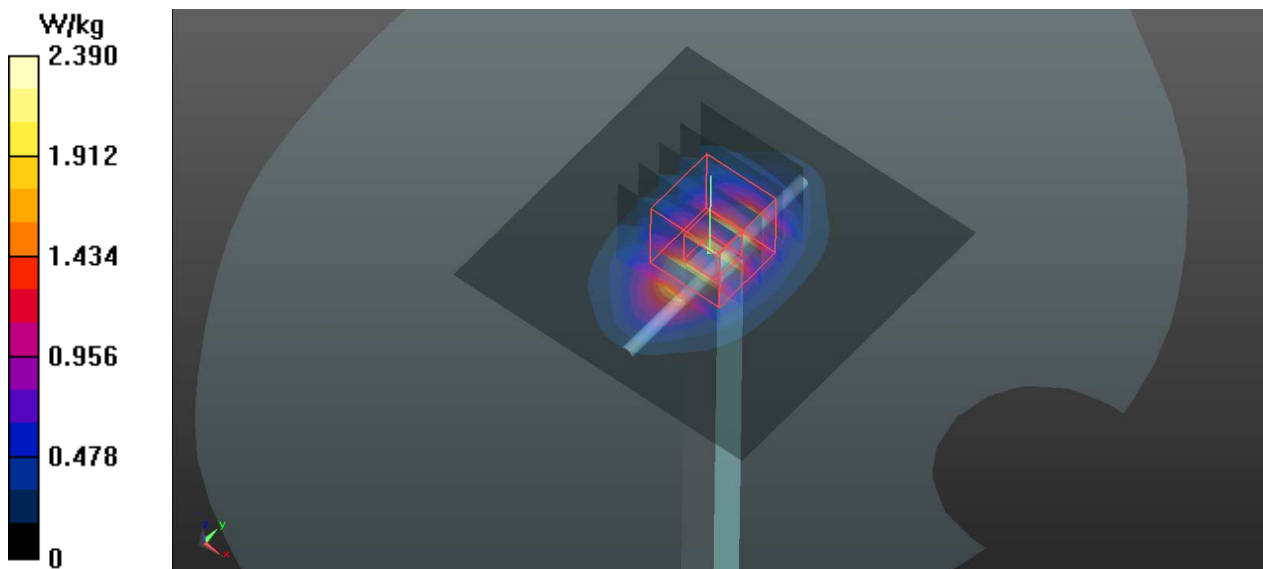
**-Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $35.88 \text{ V/m}$ ; Power Drift =  $0.01 \text{ dB}$

Peak SAR (extrapolated) =  $3.08 \text{ W/kg}$

**SAR(1 g) =  $1.66 \text{ W/kg}$ ; SAR(10 g) =  $0.860 \text{ W/kg}$**

Maximum value of SAR (measured) =  $2.41 \text{ W/kg}$



## System Check\_Head\_1900MHz\_200321\_QPSK

**DUT: Dipole:1900MHz;Type:D1900V2**

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1

Medium: HSL\_1900 Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.443$  S/m;  $\epsilon_r = 40.23$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.6°C; Liquid Temperature : 22.2°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.96, 7.96, 7.96); Calibrated: 2019/08/30;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 2019/08/28
- Phantom: Front Phantom with CRP v5.0; Type: QD000P40CD; Serial: TP:1695
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**-Area Scan (61x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.41 W/kg

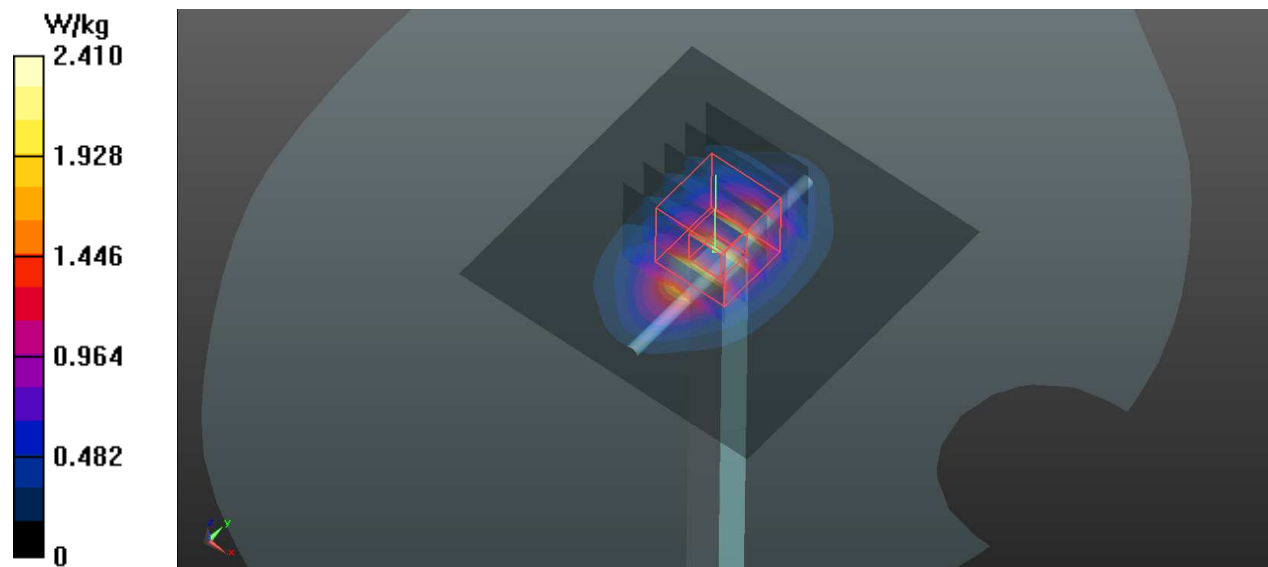
**-Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 35.96 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 3.11 W/kg

**SAR(1 g) = 1.68 W/kg; SAR(10 g) = 0.868 W/kg**

Maximum value of SAR (measured) = 2.43 W/kg



## System Check\_Head\_2600MHz\_200323\_QPSK

**DUT: Dipole:2600 MHz;Type:D2600V2**

Communication System: CW; Frequency: 2600 MHz;Duty Cycle: 1:1

Medium: HSL2600\_0323 Medium parameters used:  $f = 2600$  MHz;  $\sigma = 2.039$  S/m;  $\epsilon_r = 38.932$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4°C; Liquid Temperature : 22.5°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.12, 7.12, 7.12); Calibrated: 2019/08/30;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 2019/08/28
- Phantom: Front Phantom with CRP v5.0; Type: QD000P40CD; Serial: TP:1695
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**-Area Scan (91x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 2.34 W/kg

**-Zoom Scan (8x8x10)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 36.91 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 3.01 W/kg

**SAR(1 g) = 1.62 W/kg; SAR(10 g) = 0.841 W/kg**

Maximum value of SAR (measured) = 2.35 W/kg

