

7.2 Radio Chipset/Module 1: MedRadio

7.2.1 Maximum specified output power

Maximum Specified Output Power incl. Tune-up Tolerance				
Mode	Antenna Port	Maximum Conducted Power [dBm]	Antenna Gain [dBi]	Maximum Radiated Power [dBm]
2-FSK / 8 kbps	MICS	-17.9	1.9	-16.0
2-FSK / 197 kbps	MICS	-17.9	1.9	-16.0

7.2.2 Conducted output power

Source-based time-averaged conducted Output Power						
Mode	Antenna port	Channel	Frequency	Power [dBm]	Tune-up Power [dBm]	Duty Cycle [%]
2-FSK / 8 kbps	MICS	1	402.45	-18.9	-17.9	100
		0	403.65	-18.6	-17.9	100
		7	404.85	-19.0	-17.9	100
2-FSK / 197 kbps	MICS	1	402.45	-18.9	-17.9	100
		0	403.65	-18.6	-17.9	100
		7	404.85	-19.0	-17.9	100

Notes	
1:	Conducted power is source-based time-averaged power
2:	The actual conducted power must be within 2 dB of the specified maximum tune-up power
3:	The highest output power channel and transmission mode is used for initial SAR testing

7.2.3 Product specific SAR evaluation requirements

UMPC mini-tablet devices (1-g) SAR					
Antenna	Test Position	Antenna to DUT Surface Separation [mm]	DUT to User Separation [mm]	SAR Required	Note
MICS	Front	< 25	5	Yes	1
MICS	Back	< 25	5	Yes	1
MICS	Top	> 25	5	No	1
MICS	Bottom	< 25	5	Yes	1
MICS	Left	< 25	5	Yes	1
MICS	Right	< 25	5	Yes	1

Notes	
1:	UMPC mini-tablet devices must be tested for 1-g SAR on all surfaces and side edges with a transmitting antenna located at ≤ 25 mm from that surface or edge, at 5 mm separation from a flat phantom; When 1-g SAR is tested at 5 mm, 10-g SAR is not required

7.2.4 General output power based test exclusion per KDB 447498 D01

SAR Test Exclusion										
SAR Mode	Frequency [MHz]	Position	Tune-up power [dBm]	Tune-up power [mW]	Test Distance [mm]	Threshold power [mW]	SAR Required	Estimated SAR (1-g) [W/kg]	Estimated SAR (10-g) [W/kg]	Note
Antenna: MICS										
1-g	404.85	Front	-17.9	0	5	24	No	0.00028	N/A	1
1-g	404.85	Back	-17.9	0	5	24	No	0.00028	N/A	1
1-g	404.85	Bottom	-17.9	0	5	24	No	0.00028	N/A	1
1-g	404.85	Left	-17.9	0	5	24	No	0.00028	N/A	1
1-g	404.85	Right	-17.9	0	5	24	No	0.00028	N/A	1

Notes

1: All surfaces and edges with a maximum power below the threshold power are excluded from SAR measurements; for all other surfaces or edges SAR measurements must be performed

7.2.5 General maximum output power based test exclusion per RSS-102

SAR Test Exclusion											
SAR Mode	Frequency [MHz]	Position	Cond. power [dBm]	Tune-up power [dBm]	Tune-up power [mW]	Test Distance [mm]	Threshold power [mW]	SAR Required	Estimated SAR (1-g) [W/kg]	Estimated SAR (10-g) [W/kg]	Note
Antenna: MICS											
1-g	404.85	Front	-17.9	-16	0	5	58	No	0.00028	N/A	1
1-g	404.85	Back	-17.9	-16	0	5	58	No	0.00028	N/A	1
1-g	404.85	Bottom	-17.9	-16	0	5	58	No	0.00028	N/A	1
1-g	404.85	Left	-17.9	-16	0	5	58	No	0.00028	N/A	1
1-g	404.85	Right	-17.9	-16	0	5	58	No	0.00028	N/A	1

Notes	
1: All surfaces and edges with a maximum power below the threshold power are excluded from SAR measurements; for all other surfaces or edges SAR measurements must be performed	
2: Estimated SAR is calculated according to FCC KDB 447498 D01 from maximum conducted output power, operating frequency and test distance	

8 SAR Evaluation for Multi-Transmitter Operation

8.1 Concurrent radio operational modes

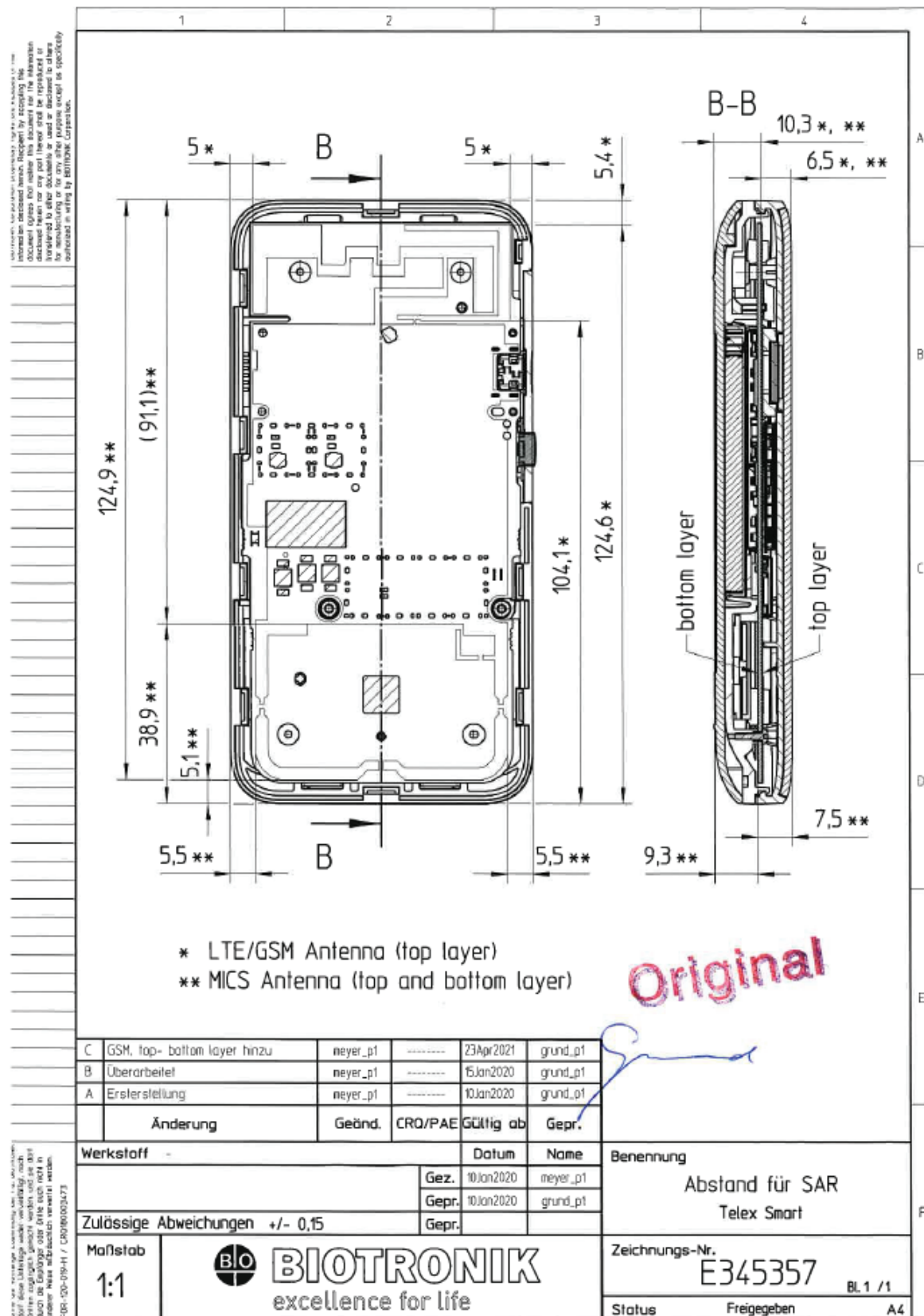
Chipset/Module 1	Chipset/Module 2
GSM	ULP-AMI

8.2 Sum of SAR evaluation

SAR Value estimation			
Mode	Maximum power [dBm]	Test volume [g]	SAR-Value [W/kg]
ULP-AMI	-17.9	1	0.00028

Multi-band transmission SAR assessment results				
Position	Transmitter operating modes		Σ SAR [W/kg (1-g)]	SAR Limit [W/kg (1-g)]
	GSM	ULP-AMI-P		
Flat-Back - 10 mm	1.411	0.00028	1.41128	1.6
Overall maximum Σ SAR [W/kg (1-g)]			1.41128	1.6

ANNEX A Antenna Dimensions and Separation Distances



ANNEX D SAR Results

Test Laboratory: Eurofins Product Service GmbH

GPRS 850 CH251 GMSK 1x Slot_Flat Front 10mm

DUT: CardioMessenger Smart 4G; Type: Handheld; Serial: 91630228

Communication System: UID 0, GPRS 850 1xSlot (0); Frequency: 848.8 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 849 \text{ MHz}$; $\sigma = 0.975 \text{ S/m}$; $\epsilon_r = 54.434$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3893; ConvF(9.98, 9.98, 9.98) @ 848.8 MHz; Calibrated: 17.09.2020
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn522; Calibrated: 10.09.2020
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP: 1013
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Configuration/CM Smart 4G/Area Scan (12x17x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.762 W/kg

Configuration/CM Smart 4G/Zoom Scan (7x7x7)/Cube 0:

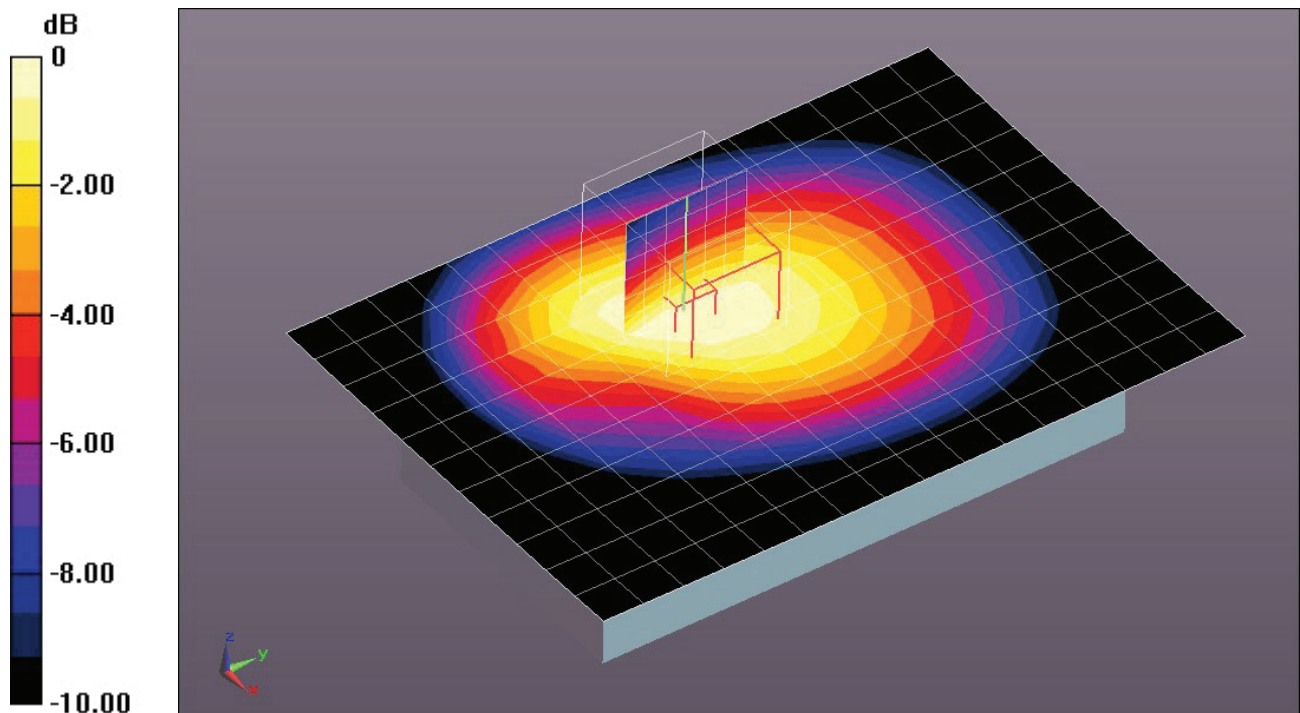
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 24.26 V/m ; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.952 W/kg

SAR(1 g) = 0.703 W/kg ; SAR(10 g) = 0.504 W/kg

Maximum value of SAR (measured) = 0.746 W/kg



0 dB = 0.746 W/kg = -1.27 dBW/kg

Test Laboratory: Eurofins Product Service GmbH

GPRS 1900 CH512 GMSK 1x Slot_Flat Back 10mm

DUT: CardioMessenger Smart 4G; Type: Handheld; Serial: 91630228

Communication System: UID 0, GPRS 1900 1xSlot (0); Frequency: 1850.2 MHz; Duty Cycle: 1:8.30042

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.506$ S/m; $\epsilon_r = 52.352$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3893; ConvF(8.49, 8.49, 8.49) @ 1850.2 MHz; Calibrated: 17.09.2020
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn522; Calibrated: 10.09.2020
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP: 1013
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Configuration/CM Smart 4G/Area Scan (12x17x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.11 W/kg

Configuration/CM Smart 4G/Zoom Scan (7x7x7)/Cube 0:

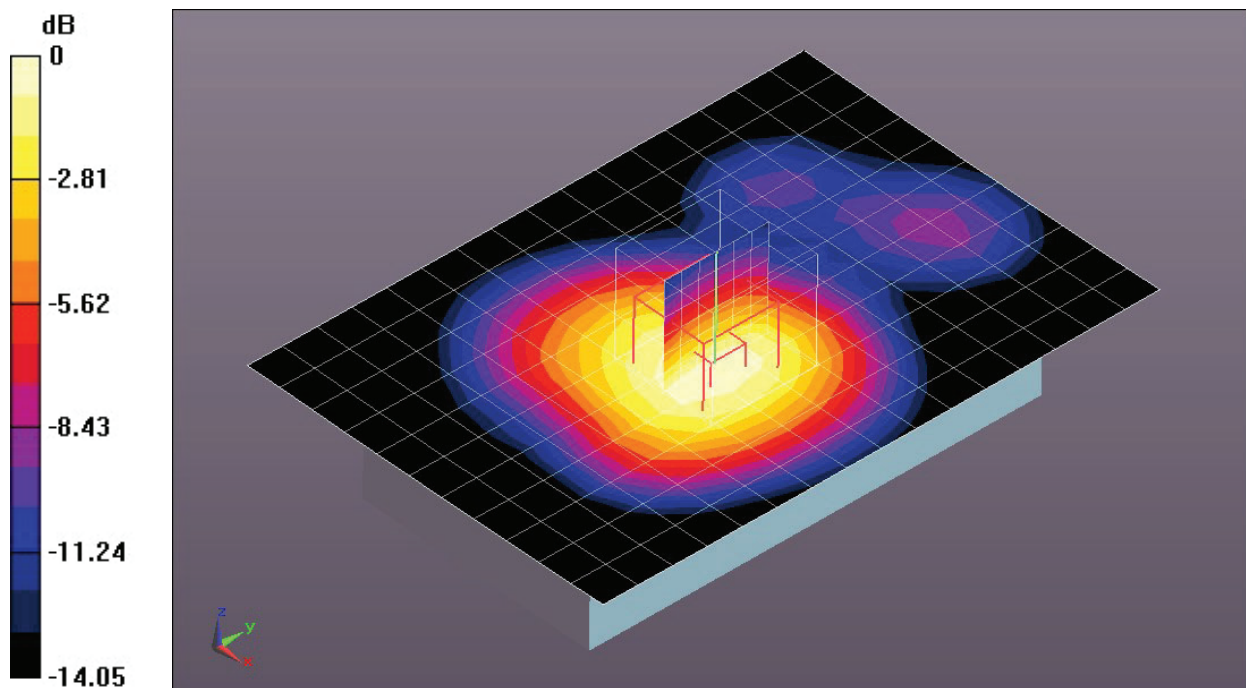
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 23.48 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.63 W/kg

SAR(1 g) = 1.07 W/kg; SAR(10 g) = 0.674 W/kg

Maximum value of SAR (measured) = 1.16 W/kg



Test Laboratory: Eurofins Product Service GmbH

GPRS 1900 CH512 GMSK 1x Slot_Flat Back 10mm R1

DUT: CardioMessenger Smart 4G; Type: Handheld; Serial: 91630228

Communication System: UID 0, GPRS 1900 1xSlot (0); Frequency: 1850.2 MHz; Duty Cycle: 1:8.30042

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.563$ S/m; $\epsilon_r = 52.511$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3893; ConvF(8.49, 8.49, 8.49) @ 1850.2 MHz; Calibrated: 17.09.2020
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn522; Calibrated: 10.09.2020
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP: 1013
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Configuration/CM Smart 4G/Area Scan (12x17x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.05 W/kg

Configuration/CM Smart 4G/Zoom Scan (7x7x7)/Cube 0:

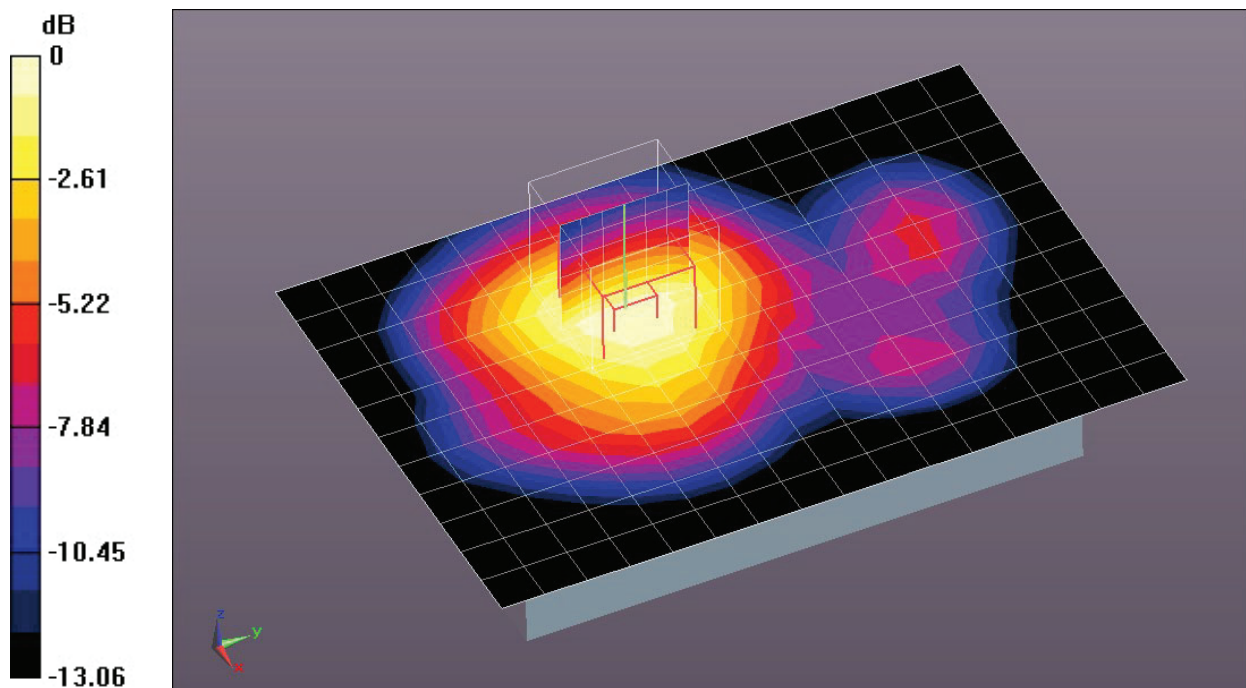
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.59 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.50 W/kg

SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.656 W/kg

Maximum value of SAR (measured) = 1.09 W/kg



0 dB = 1.09 W/kg = 0.37 dBW/kg

Test Laboratory: Eurofins Product Service GmbH

GPRS 1900 CH661 GMSK 1x Slot_Flat Back 10mm R1

DUT: CardioMessenger Smart 4G; Type: Handheld; Serial: 91630228

Communication System: UID 0, GPRS 1900 1xSlot (0); Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.577$ S/m; $\epsilon_r = 52.148$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3893; ConvF(8.49, 8.49, 8.49) @ 1880 MHz; Calibrated: 17.09.2020
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn522; Calibrated: 10.09.2020
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP: 1013
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Configuration/CM Smart 4G/Area Scan (12x17x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.995 W/kg

Configuration/CM Smart 4G/Zoom Scan (7x7x7)/Cube 0:

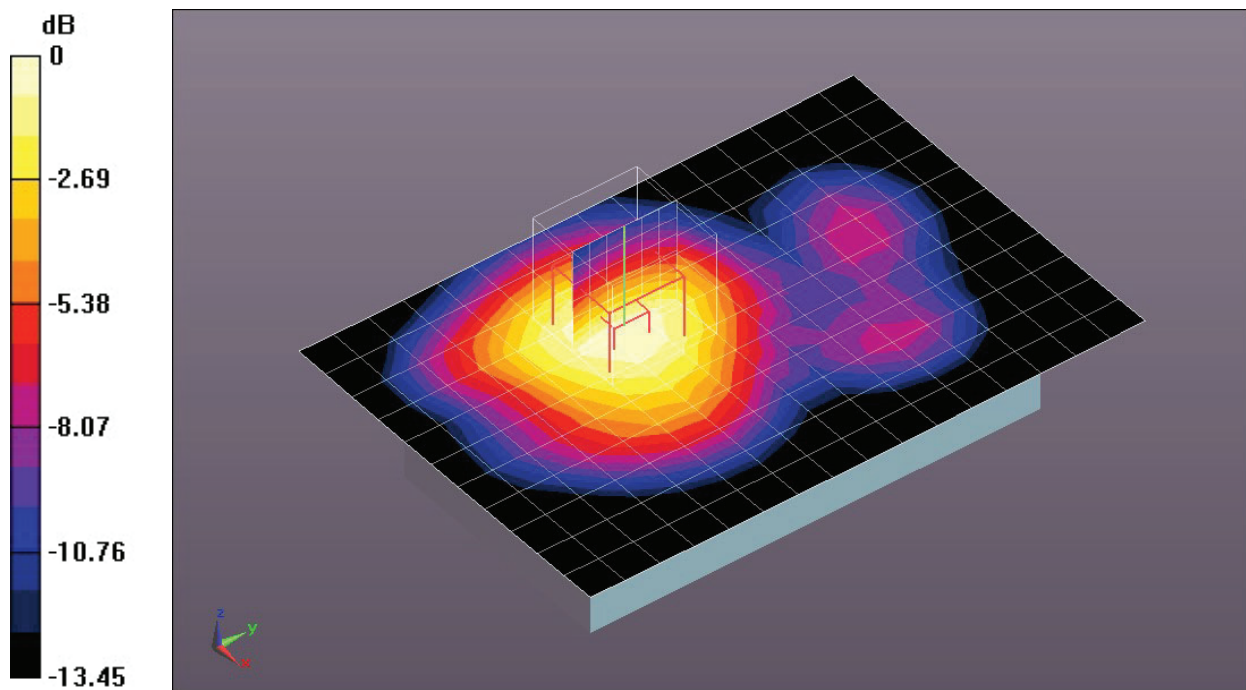
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.17 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.43 W/kg

SAR(1 g) = 0.955 W/kg; SAR(10 g) = 0.613 W/kg

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



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

Test Laboratory: Eurofins Product Service GmbH

GPRS 1900 CH661 GMSK 1x Slot_Flat Front 10mm R1

DUT: CardioMessenger Smart 4G; Type: Handheld; Serial: 91630228

Communication System: UID 0, GPRS 1900 1xSlot (0); Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.577$ S/m; $\epsilon_r = 52.148$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3893; ConvF(8.49, 8.49, 8.49) @ 1880 MHz; Calibrated: 17.09.2020
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn522; Calibrated: 10.09.2020
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP: 1013
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Configuration/CM Smart 4G/Area Scan (12x17x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.969 W/kg

Configuration/CM Smart 4G/Zoom Scan (7x7x7)/Cube 0:

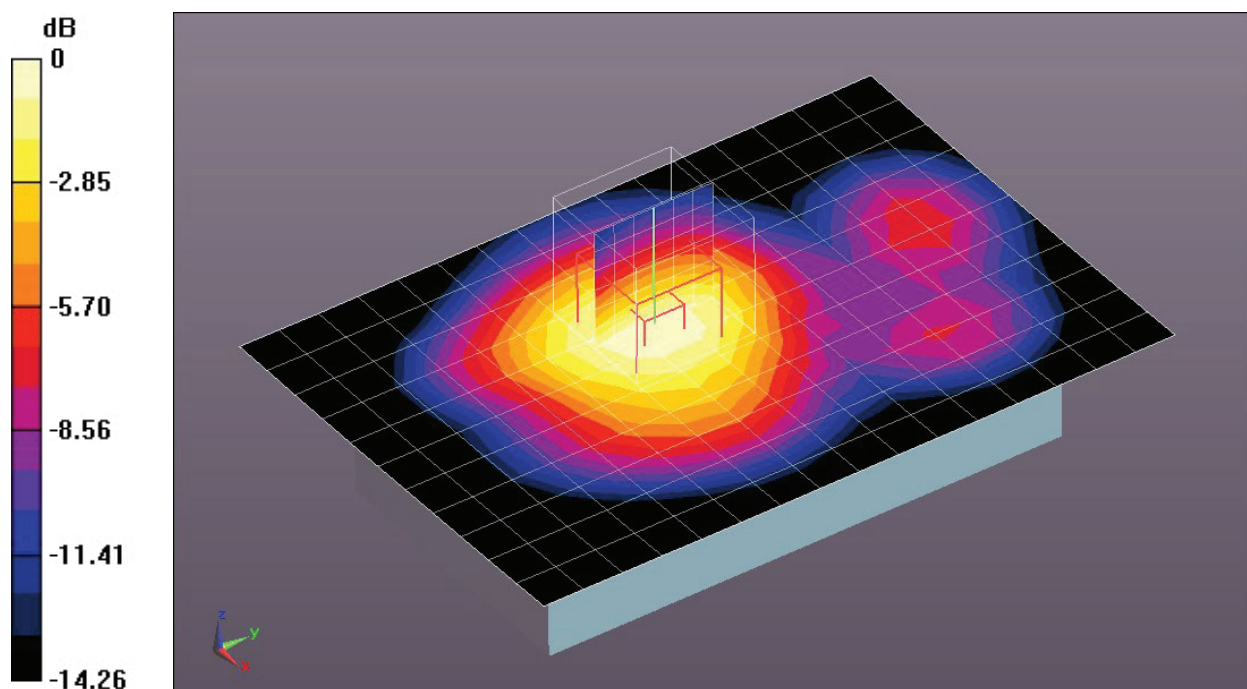
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 22.09 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.42 W/kg

SAR(1 g) = 0.923 W/kg; SAR(10 g) = 0.580 W/kg

Maximum value of SAR (measured) = 0.999 W/kg



0 dB = 0.999 W/kg = -0.00 dBW/kg

Test Laboratory: Eurofins Product Service GmbH

GPRS 1900 CH810 GMSK 1x Slot_Flat Back 10mm R1

DUT: CardioMessenger Smart 4G; Type: Handheld; Serial: 91630228

Communication System: UID 0, GPRS 1900 1xSlot (0); Frequency: 1909.8 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.563$ S/m; $\epsilon_r = 52.059$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3893; ConvF(8.49, 8.49, 8.49) @ 1909.8 MHz; Calibrated: 17.09.2020
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn522; Calibrated: 10.09.2020
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP: 1013
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Configuration/CM Smart 4G/Area Scan (12x17x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.886 W/kg

Configuration/CM Smart 4G/Zoom Scan (7x7x7)/Cube 0:

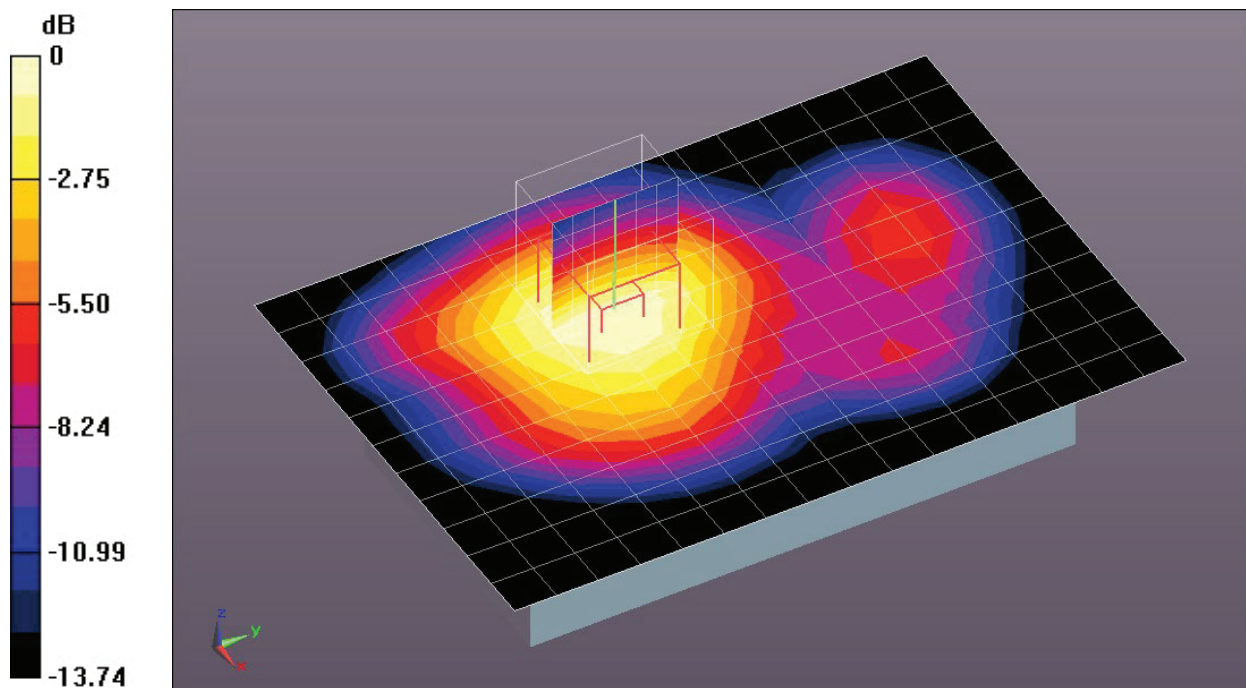
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.49 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.27 W/kg

SAR(1 g) = 0.838 W/kg; SAR(10 g) = 0.536 W/kg

Maximum value of SAR (measured) = 0.895 W/kg



Test Laboratory: Eurofins Product Service GmbH

GPRS 1900 CH810 GMSK 1x Slot_Flat Front 10mm R1

DUT: CardioMessenger Smart 4G; Type: Handheld; Serial: 91630228

Communication System: UID 0, GPRS 1900 1xSlot (0); Frequency: 1909.8 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.563$ S/m; $\epsilon_r = 52.059$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3893; ConvF(8.49, 8.49, 8.49) @ 1909.8 MHz; Calibrated: 17.09.2020
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn522; Calibrated: 10.09.2020
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP: 1013
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Configuration/CM Smart 4G/Area Scan (12x17x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.912 W/kg

Configuration/CM Smart 4G/Zoom Scan (7x7x7)/Cube 0:

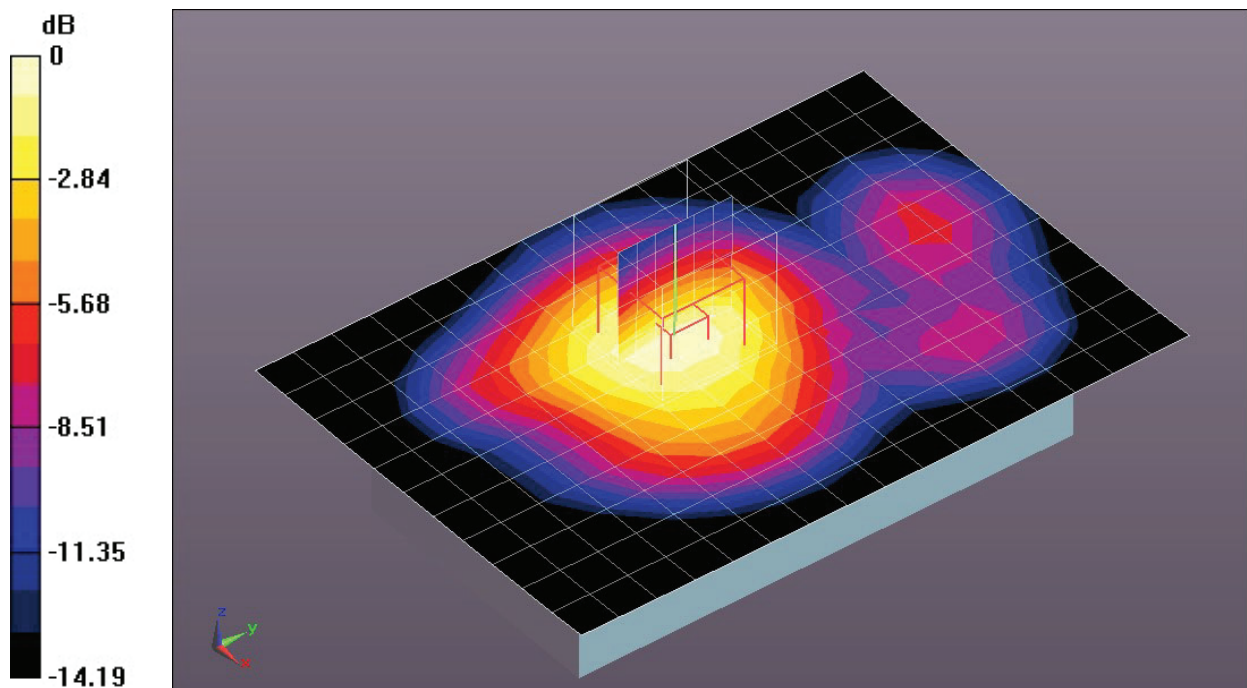
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 22.41 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.37 W/kg

SAR(1 g) = 0.889 W/kg; SAR(10 g) = 0.556 W/kg

Maximum value of SAR (measured) = 0.965 W/kg



0 dB = 0.965 W/kg = -0.15 dBW/kg

ANNEX E System Validation Results

Test Laboratory: Eurofins Product Service GmbH

Dipol Valid.900 (m)_250mW ELI4_2021-03-16

DUT: Dipole 900 MHz; Type: D900V2; Serial: 164

Communication System: UID 0, CW (0); Frequency: 900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 900 \text{ MHz}$; $\sigma = 1.031 \text{ S/m}$; $\epsilon_r = 54.115$; $\rho = 1000 \text{ kg/m}^3$

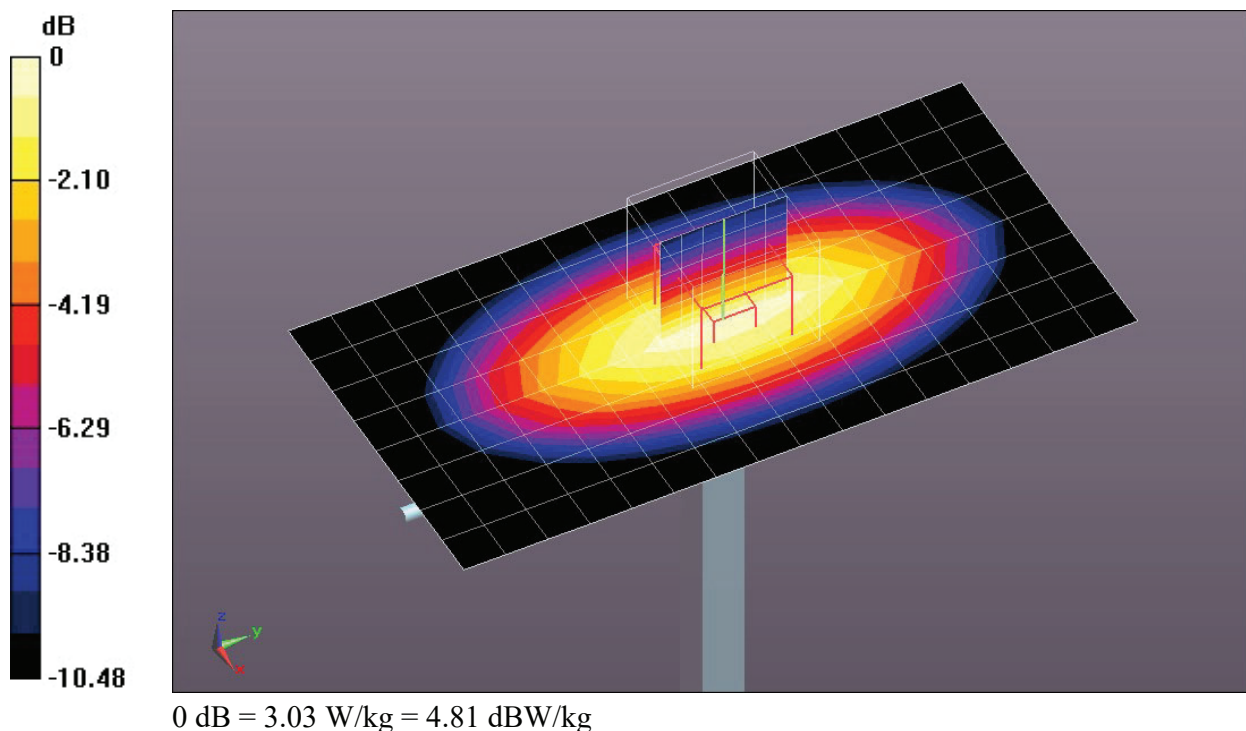
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3893; ConvF(9.85, 9.85, 9.85) @ 900 MHz; Calibrated: 17.09.2020
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn522; Calibrated: 10.09.2020
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP: 1013
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

System Performance Check at Frequencies below 1 GHz/d=15mm, Pin=250 mW, dist=4.0mm (EX-Probe)/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 2.99 W/kg

System Performance Check at Frequencies below 1 GHz/d=15mm, Pin=250 mW, dist=4.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.01 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 4.21 W/kg
SAR(1 g) = 2.8 W/kg; SAR(10 g) = 1.82 W/kg
Maximum value of SAR (measured) = 3.03 W/kg



Test Laboratory: Eurofins Product Service GmbH

Dipol Valid.900 (m)_250mW ELI4_2021-03-17

DUT: Dipole 900 MHz; Type: D900V2; Serial: 164

Communication System: UID 0, CW (0); Frequency: 900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 900 \text{ MHz}$; $\sigma = 1.031 \text{ S/m}$; $\epsilon_r = 54.115$; $\rho = 1000 \text{ kg/m}^3$

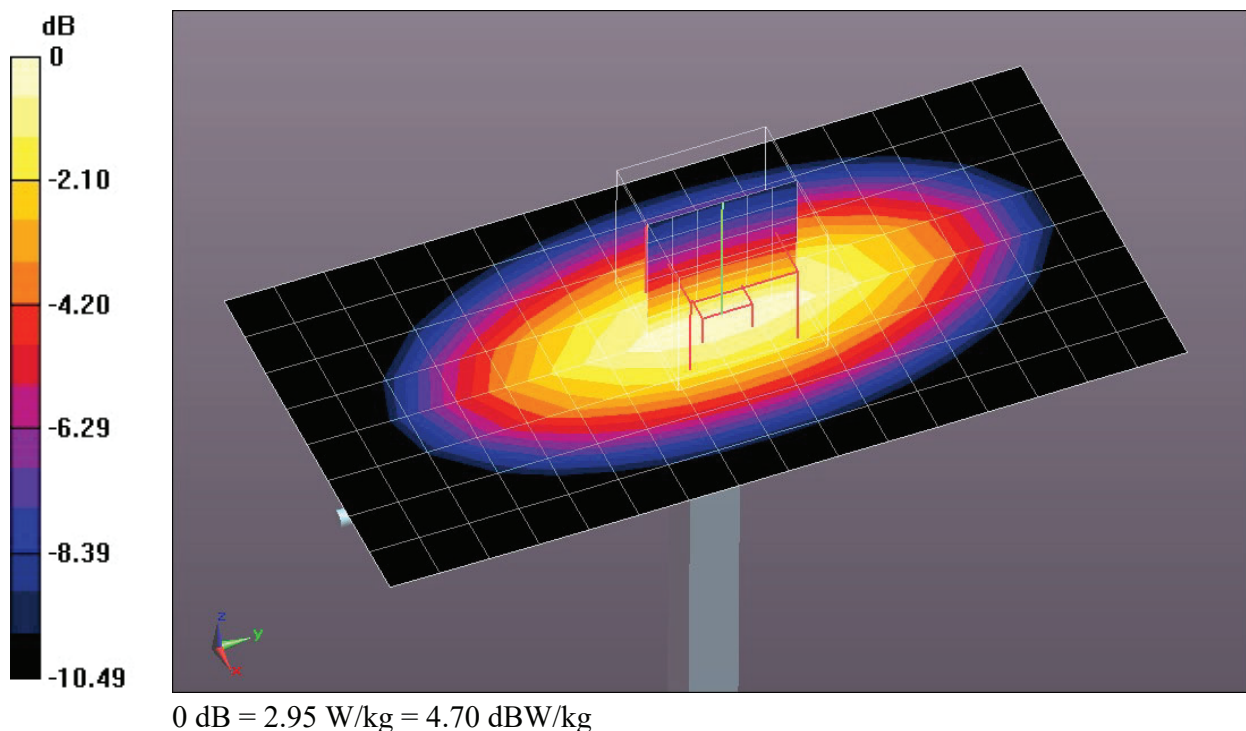
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3893; ConvF(9.85, 9.85, 9.85) @ 900 MHz; Calibrated: 17.09.2020
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn522; Calibrated: 10.09.2020
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP: 1013
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

System Performance Check at Frequencies below 1 GHz/d=15mm, Pin=250 mW, dist=4.0mm (EX-Probe)/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 2.91 W/kg

System Performance Check at Frequencies below 1 GHz/d=15mm, Pin=250 mW, dist=4.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.02 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 4.12 W/kg
SAR(1 g) = 2.75 W/kg; SAR(10 g) = 1.79 W/kg
Maximum value of SAR (measured) = 2.95 W/kg



Test Laboratory: Eurofins Product Service GmbH

Dipol Valid.900 (m)_250mW ELI4_2021-03-18

DUT: Dipole 900 MHz; Type: D900V2; Serial: 164

Communication System: UID 0, CW (0); Frequency: 900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 900$ MHz; $\sigma = 1.03$ S/m; $\epsilon_r = 54.027$; $\rho = 1000$ kg/m³

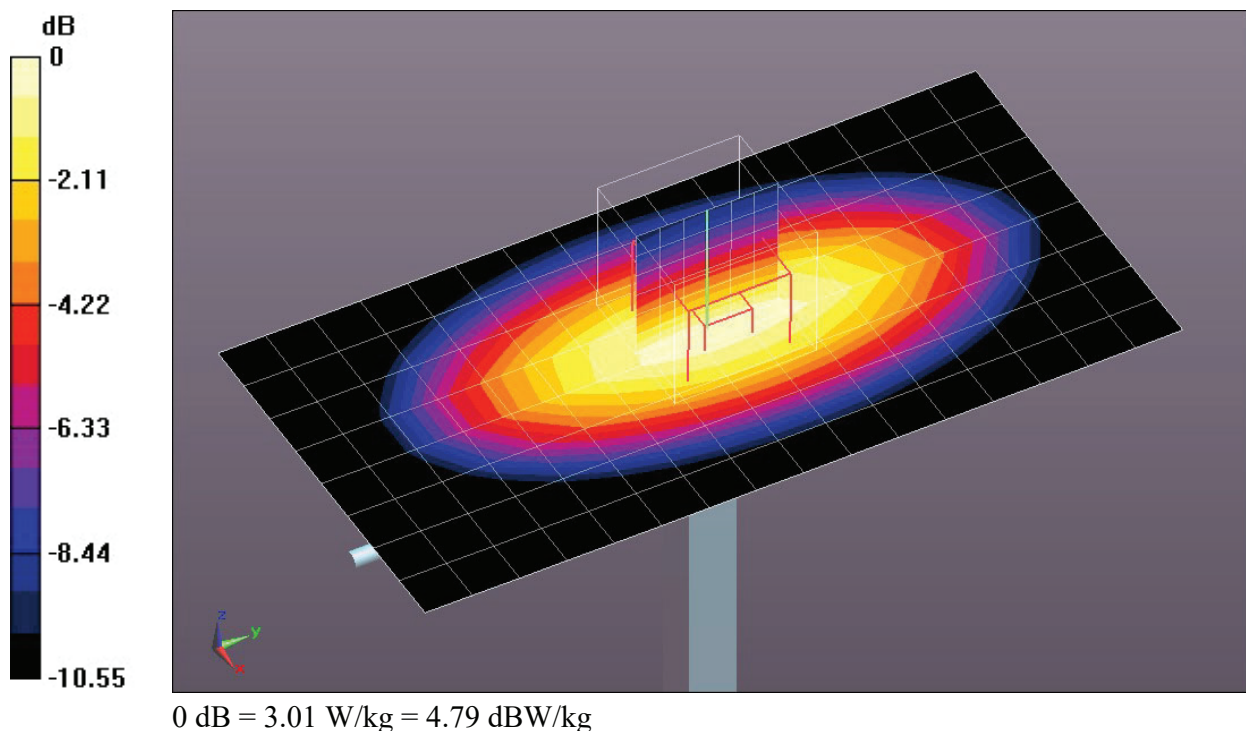
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3893; ConvF(9.85, 9.85, 9.85) @ 900 MHz; Calibrated: 17.09.2020
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn522; Calibrated: 10.09.2020
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP: 1013
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

System Performance Check at Frequencies below 1 GHz/d=15mm, Pin=250 mW, dist=4.0mm (EX-Probe)/Area Scan (9x17x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 2.91 W/kg

System Performance Check at Frequencies below 1 GHz/d=15mm, Pin=250 mW, dist=4.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.21 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 4.18 W/kg
SAR(1 g) = 2.78 W/kg; SAR(10 g) = 1.81 W/kg
Maximum value of SAR (measured) = 3.01 W/kg



Test Laboratory: Eurofins Product Service GmbH

Dipol Valid.1900 (m)_250mW ELI4_24.03.2021

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d025

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.492$ S/m; $\epsilon_r = 52.017$; $\rho = 1000$ kg/m³

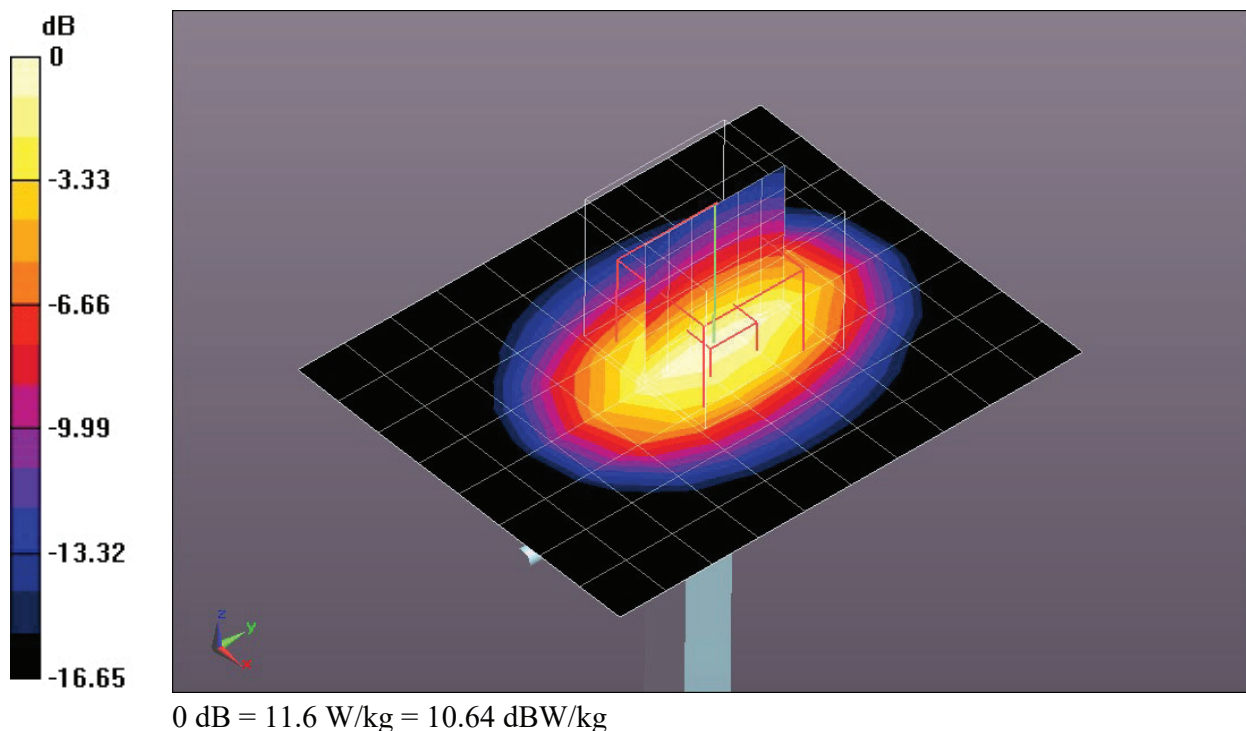
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3893; ConvF(8.49, 8.49, 8.49) @ 1900 MHz; Calibrated: 17.09.2020
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn522; Calibrated: 10.09.2020
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP: 1013
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

System Performance Check at Frequencies above 1 GHz/d=10mm, Pin=250 mW, dist=4.0mm (EX-Probe)/Area Scan (9x11x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 11.2 W/kg

System Performance Check at Frequencies above 1 GHz/d=10mm, Pin=250 mW, dist=4.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 86.72 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 18.8 W/kg
SAR(1 g) = 10.3 W/kg; SAR(10 g) = 5.43 W/kg
Maximum value of SAR (measured) = 11.6 W/kg



Test Laboratory: Eurofins Product Service GmbH

Dipol Valid.1900 (m)_250mW ELI4_25.03.2021

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d025

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.492$ S/m; $\epsilon_r = 52.017$; $\rho = 1000$ kg/m³

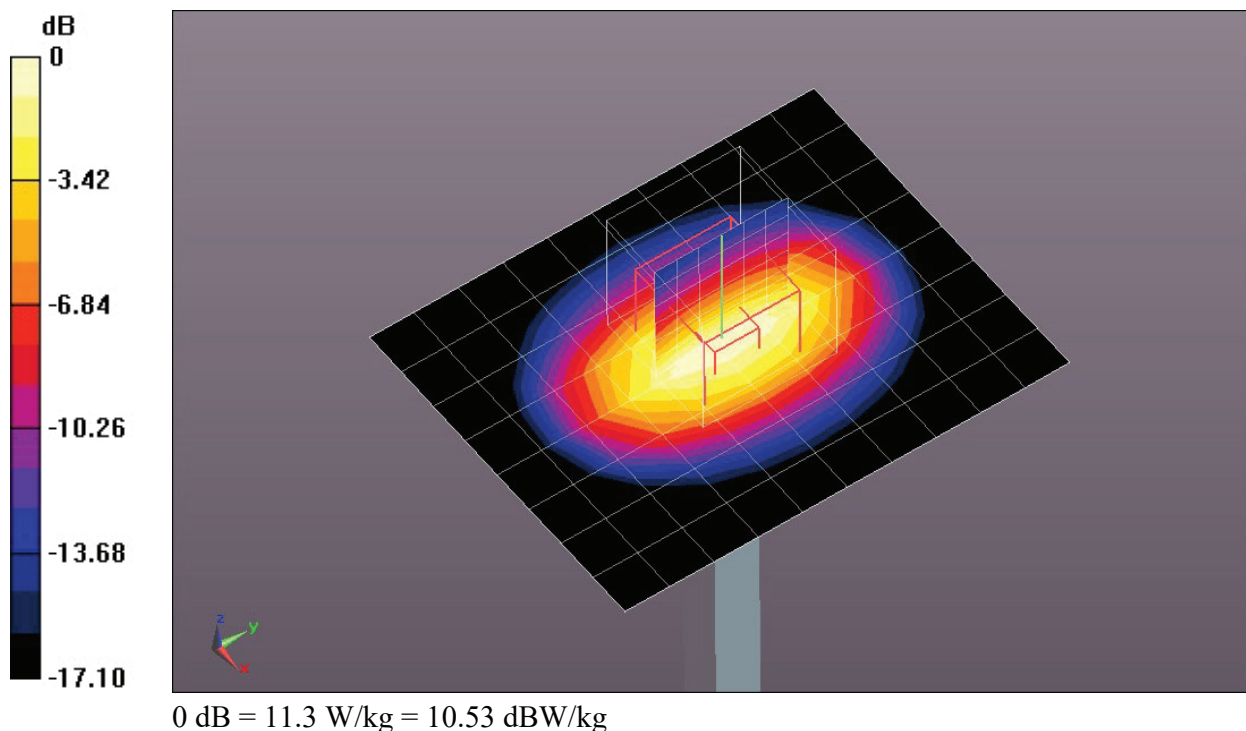
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3893; ConvF(8.49, 8.49, 8.49) @ 1900 MHz; Calibrated: 17.09.2020
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn522; Calibrated: 10.09.2020
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP: 1013
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

System Performance Check at Frequencies above 1 GHz/d=10mm, Pin=250 mW, dist=4.0mm (EX-Probe)/Area Scan (9x11x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 11.2 W/kg

System Performance Check at Frequencies above 1 GHz/d=10mm, Pin=250 mW, dist=4.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 86.37 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 18.6 W/kg
SAR(1 g) = 10.1 W/kg; SAR(10 g) = 5.22 W/kg
Maximum value of SAR (measured) = 11.3 W/kg



Test Laboratory: Eurofins Product Service GmbH

Dipol Valid.1900 (m)_250mW ELI4_26.03.2021

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d025

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.579$ S/m; $\epsilon_r = 52.374$; $\rho = 1000$ kg/m³

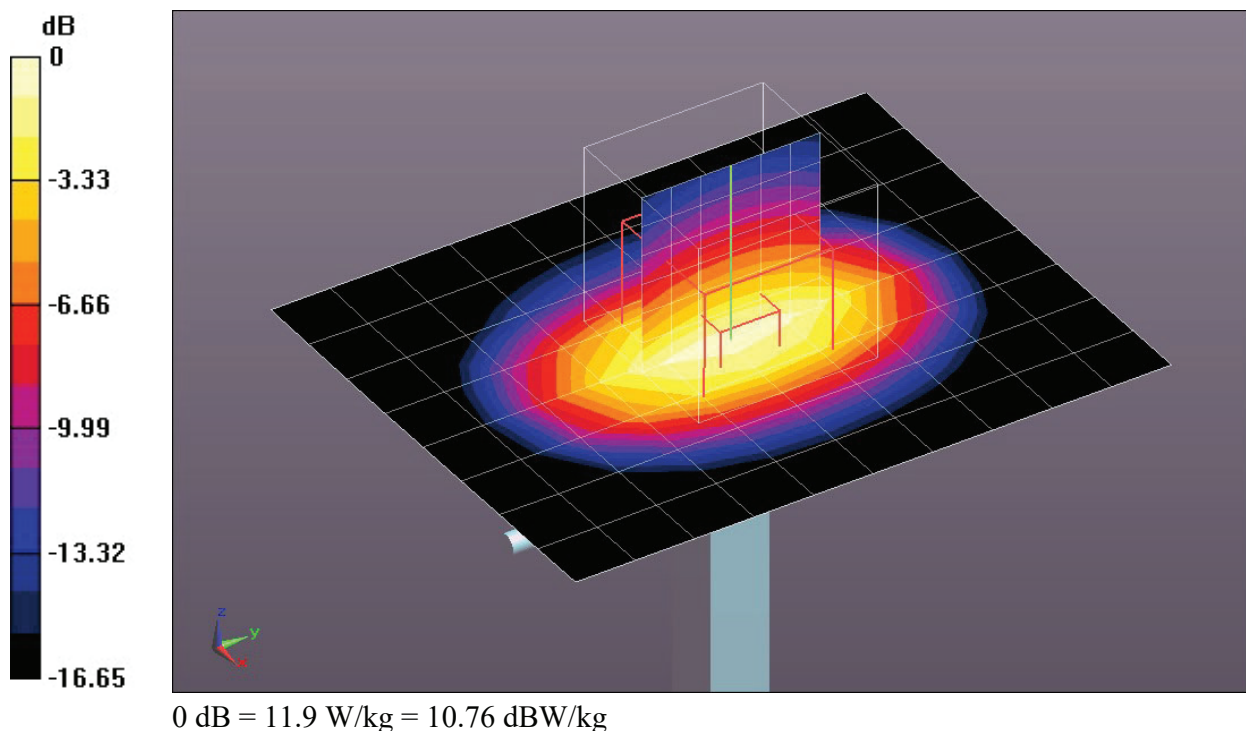
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3893; ConvF(8.49, 8.49, 8.49) @ 1900 MHz; Calibrated: 17.09.2020
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn522; Calibrated: 10.09.2020
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP: 1013
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

System Performance Check at Frequencies above 1 GHz/d=10mm, Pin=250 mW, dist=4.0mm (EX-Probe)/Area Scan (9x11x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 11.8 W/kg

System Performance Check at Frequencies above 1 GHz/d=10mm, Pin=250 mW, dist=4.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 86.53 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 19.2 W/kg
SAR(1 g) = 10.5 W/kg; SAR(10 g) = 5.49 W/kg
Maximum value of SAR (measured) = 11.9 W/kg



Test Laboratory: Eurofins Product Service GmbH

Dipol Valid.1900 (m)_250mW ELI4_29.03.2021

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d025

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.568$ S/m; $\epsilon_r = 52.04$; $\rho = 1000$ kg/m³

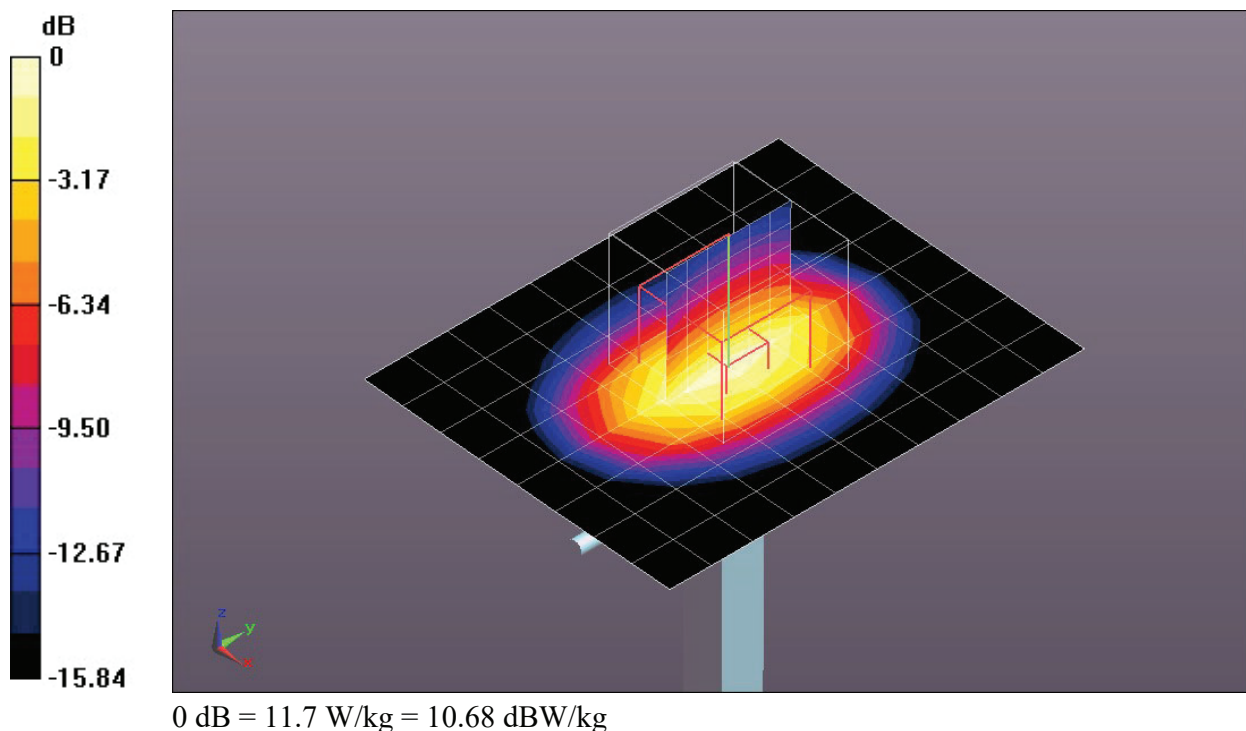
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3893; ConvF(8.49, 8.49, 8.49) @ 1900 MHz; Calibrated: 17.09.2020
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn522; Calibrated: 10.09.2020
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP: 1013
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

System Performance Check at Frequencies above 1 GHz/d=10mm, Pin=250 mW, dist=4.0mm (EX-Probe)/Area Scan (9x11x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 11.7 W/kg

System Performance Check at Frequencies above 1 GHz/d=10mm, Pin=250 mW, dist=4.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 86.53 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 18.5 W/kg
SAR(1 g) = 10.4 W/kg; SAR(10 g) = 5.53 W/kg
Maximum value of SAR (measured) = 11.7 W/kg



Test Laboratory: Eurofins Product Service GmbH

Dipol Valid.1900 (m)_250mW ELI4_30.03.2021

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d025

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.568$ S/m; $\epsilon_r = 52.04$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3893; ConvF(8.49, 8.49, 8.49) @ 1900 MHz; Calibrated: 17.09.2020
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn522; Calibrated: 10.09.2020
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP: 1013
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

System Performance Check at Frequencies above 1 GHz/d=10mm, Pin=250 mW, dist=4.0mm (EX-Probe)/Area Scan (9x11x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 11.7 W/kg

System Performance Check at Frequencies above 1 GHz/d=10mm, Pin=250 mW, dist=4.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 86.23 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 19.0 W/kg
SAR(1 g) = 10.4 W/kg; SAR(10 g) = 5.43 W/kg
Maximum value of SAR (measured) = 11.7 W/kg

