

I.3 Spot Check

I.3.1 Conducted power of selected case

Table I.3.1-1: The conducted power measurement results for GSM850/1900

GSM 850MHZ	Measured Power (dBm)		
	251	190	128
Speech	/	31.86	/
GPRS(1Tx)	31.93	/	/
GSM1900MHZ	Measured Power (dBm)		
	810	661	512
Speech	/	28.82	/
GPRS(3Tx)	/	/	24.35

Table I.3.1-2: The conducted Power for WCDMA-Normal Power

Item	band	FDDV result		
	ARFCN	4132 (826.4MHz)	4182 (836.4MHz)	4233 (846.6MHz)
WCDMA	\	22.28	/	22.32
Item	band	FDDIV result		
	ARFCN	1312 (1712.4MHz)	1412 (1732.4MHz)	1513 (1752.6MHz)
WCDMA	\	22.10	/	/
Item	band	FDDII result		
	ARFCN	9262 (1852.4MHz)	9400 (1880MHz)	9538 (1907.6MHz)
WCDMA	\	21.81	21.90	/

Table I.3.1-3: The conducted Power for WCDMA-Low Power

Item	band	FDDIV result		
	ARFCN	1312 (1712.4MHz)	1412 (1732.4MHz)	1513 (1752.6MHz)
WCDMA	\	19.27	/	/
Item	band	FDDII result		
	ARFCN	9262 (1852.4MHz)	9400 (1880MHz)	9538 (1907.6MHz)
WCDMA	\	19.03	/	/

Table I.3.1-4: The conducted Power for LTE -Normal power

Test Band	RB offset	Channel	Conducted Power (dBm)
LTE Band12	25RB- Middle	23130	20.53
LTE Band12	1RB- Middle	23060	22.30
LTE Band66	1RB-Middle	132572	22.11
LTE Band66	1RB-Low	132072	21.92

Table I.3.1-5: The conducted Power for LTE -Low power

Test Band	RB offset	Channel	Conducted Power (dBm)
LTE Band66	50RB-High	132072	19.23

Table I.3.1-6: The conducted Power for WLAN

Mode / data rate	Channel	Measured Power (dBm)
2.4G-11b	11	19.09

I.3.2 Measurement results

Test Band	Channel	Frequency	Tune-Up	Measured Power	Test Position	Measured 10g SAR	Measured 1g SAR	Reported 10g SAR	Reported 1g SAR	Power Drift
GSM850	190	836.6	33	31.86	Left Cheek	0.162	0.236	0.21	0.31	0.11
GSM850	251	848.8	33	31.93	Rear	0.334	0.467	0.43	0.60	0.09
PCS1900	661	1880	30.5	28.82	Left Cheek	0.0228	0.0374	0.03	0.06	0.09
PCS1900	512	1850.2	26	24.35	Rear unfold	0.493	0.829	0.72	1.21	-0.03
WCDMA1900-BII	9400	1880	23	21.9	Left Cheek	0.306	0.494	0.39	0.64	-0.12
WCDMA1900-BII	9262	1852.4	20	19.03	Rear	0.452	0.788	0.57	0.99	0.03
WCDMA1900-BII	9262	1852.4	23	21.81	Rear	0.44	0.747	0.58	0.98	-0.04
WCDMA1700-BIV	1312	1712.4	24	22.1	Left Cheek	0.192	0.296	0.30	0.46	0.07
WCDMA1700-BIV	1312	1712.4	20	19.27	Rear	0.539	0.954	0.64	1.13	-0.07
WCDMA1700-BIV	1312	1712.4	24	22.1	Rear	0.407	0.713	0.63	1.10	0.03
WCDMA850-BV	4233	846.6	24	22.32	Right Cheek	0.208	0.342	0.31	0.50	0.15
WCDMA850-BV	4132	826.4	24	22.28	Rear	0.29	0.409	0.43	0.61	0.02
LTE700-FDD12	23130	711 MHz	22.5	20.53	Right Cheek	0.0849	0.129	0.13	0.20	0.06
LTE700-FDD12	23060	704 MHz	23.5	22.3	Rear unfold	0.234	0.321	0.31	0.42	-0.14
LTE1700-FDD66	132572	1770 MHz	23.5	22.11	Left Cheek	0.165	0.267	0.23	0.37	-0.17
LTE1700-FDD66	132072	1720 MHz	20.5	19.23	Rear	0.457	0.815	0.61	1.09	-0.08
LTE1700-FDD66	132072	1720 MHz	23.5	21.92	Rear	0.386	0.659	0.56	0.95	-0.16
WLAN2450	11	2462	19.5	19.09	Right Cheek	0.168	0.307	0.18	0.34	0.06
WLAN2450	11	2462	19.5	19.09	Rear unfold	0.06	0.111	0.07	0.12	-0.07

I.3.3 Reported SAR Comparison
Table I.3.3-1: Highest Reported SAR (1g)

Exposure Configuration	Technology Band	Reported SAR 1g(W/kg) Original	Reported SAR 1g(W/kg) Spot check	Equipment Class
Head (Separation Distance 0mm)	GSM 850	0.54	0.31	PCE
	PCS 1900	0.29	0.06	
	UMTS FDD 2	0.61	0.64	
	UMTS FDD 4	0.61	0.46	
	UMTS FDD 5	0.78	0.50	
	LTE Band 12	0.61	0.20	
	LTE Band 66	0.44	0.37	
	WLAN 2.4 GHz	0.64	0.34	DTS
Hotspot (Separation Distance 10mm)	GSM 850	0.75	0.60	PCE
	PCS 1900	1.24	1.21	
	UMTS FDD 2	1.13	0.99	
	UMTS FDD 4	1.23	1.13	
	UMTS FDD 5	0.97	0.61	
	LTE Band 12	0.77	0.42	
	LTE Band 66	1.13	1.09	

	WLAN 2.4 GHz	0.23	0.12	DTS
Body-worn (Separation Distance)	UMTS FDD 2	1.25	0.98	PCE
	UMTS FDD 4	1.27	1.10	
	LTE Band 66	1.07	0.95	

Note: The spot check results marked by blue are larger than the original result. So they replace the original result and others are shared.

I.4 List of Main Instruments

Table E.4-1: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	E5071C	MY46110673	January 14, 2021	One year
02	Power meter	NRP2	101919	May 12, 2020	One year
03	Power sensor	NRP-Z91	101547		
04	Signal Generator	E4438C	MY49070393	May 14, 2020	One Year
05	Amplifier	60S1G4	0331848	No Calibration Requested	
06	BTS	CMW500	159890	January 25 2021	One year
07	E-field Probe	SPEAG EX3DV4	7307	May 29, 2020	One year
08	DAE	SPEAG DAE4	536	November 6, 2020	One year
09	Dipole Validation Kit	SPEAG D750V3	1017	July 24,2020	One year
10	Dipole Validation Kit	SPEAG D835V2	4d069	July 24,,2020	One year
11	Dipole Validation Kit	SPEAG D1750V2	1003	July 24, 2020	One year
12	Dipole Validation Kit	SPEAG D1900V2	5d101	July 28,2020	One year
13	Dipole Validation Kit	SPEAG D2450V2	853	July 21,2020	One year
14	Dipole Validation Kit	SPEAG D2600V2	1012	July 21,2020	One year

I.5 GRAPH RESULTS

GSM850_CH190 Left Cheek

Date: 3/15/2021

Electronics: DAE4 Sn536

Medium: head 835 MHz

Medium parameters used: $f = 836.6$; $\sigma = 0.894$ mho/m; $\epsilon_r = 41.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: GSM850 836.6 Duty Cycle: 1: 8.3

Probe: EX3DV4 – SN7307 ConvF(10.2,10.2,10.2)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.301 W/kg

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

Reference Value = 7.891 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.364 W/kg

SAR(1 g) = 0.236 W/kg; SAR(10 g) = 0.162 W/kg

Maximum value of SAR (measured) = 0.307 W/kg

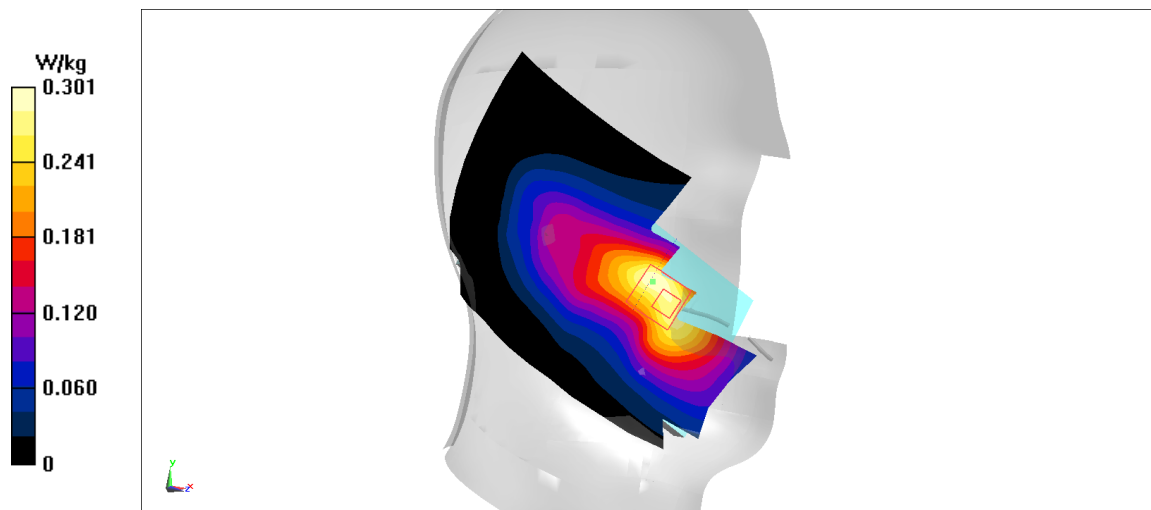


Fig A.1

GSM850_CH251 Rear

Date: 3/15/2021

Electronics: DAE4 Sn536

Medium: head 835 MHz

Medium parameters used: $f = 848.8$; $\sigma = 0.905$ mho/m; $\epsilon_r = 41.08$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: GSM850 848.8 Duty Cycle: 1: 8.3

Probe: EX3DV4 – SN7307 ConvF(10.2,10.2,10.2)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.571 W/kg

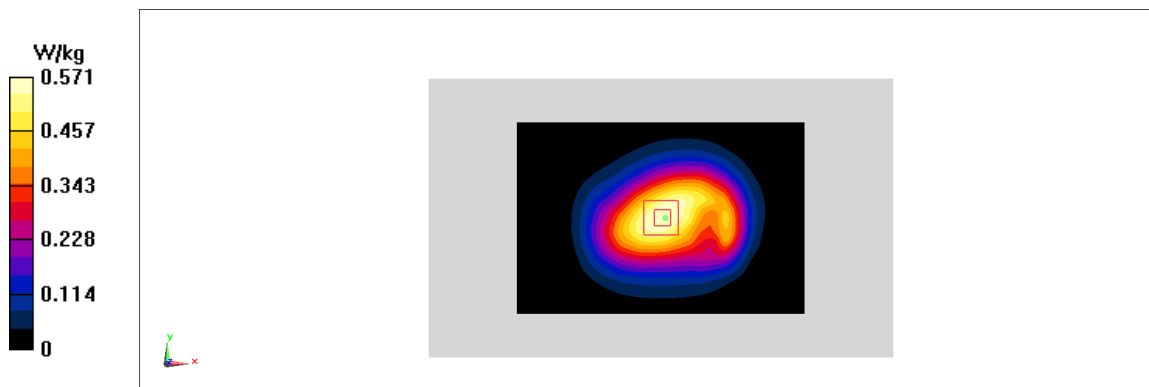
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 23.14 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.638 W/kg

SAR(1 g) = 0.467 W/kg; SAR(10 g) = 0.334 W/kg

Maximum value of SAR (measured) = 0.576 W/kg

**Fig A.2**

PCS1900_CH661 Left Cheek

Date: 3/17/2021

Electronics: DAE4 Sn536

Medium: head 1900 MHz

Medium parameters used: $f = 1880$; $\sigma = 1.409$ mho/m; $\epsilon_r = 40.01$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: PCS1900 1880 Duty Cycle: 1: 8.3

Probe: EX3DV4 – SN7307 ConvF(8.33,8.33,8.33)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.0501 W/kg

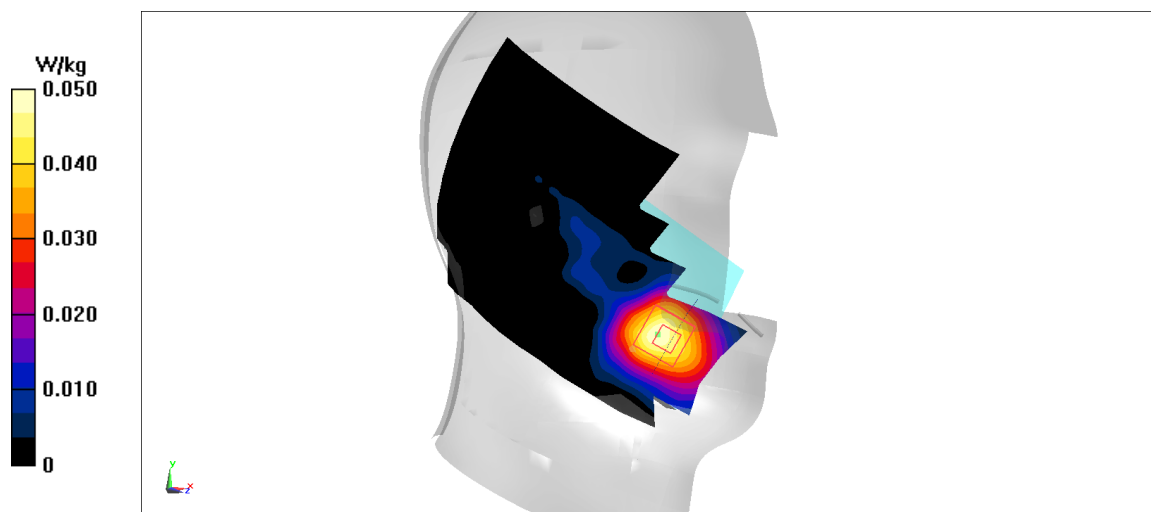
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 0 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.061 W/kg

SAR(1 g) = 0.0374 W/kg; SAR(10 g) = 0.0228 W/kg

Maximum value of SAR (measured) = 0.052 W/kg

**Fig A.3**

PCS1900_CH512 Rear unfold

Date: 3/17/2021

Electronics: DAE4 Sn536

Medium: head 1900 MHz

Medium parameters used: $f = 1850.2$; $\sigma = 1.38$ mho/m; $\epsilon_r = 40.05$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: PCS1900 1850.2 Duty Cycle: 1: 2.67

Probe: EX3DV4 – SN7307 ConvF(8.33,8.33,8.33)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.24 W/kg

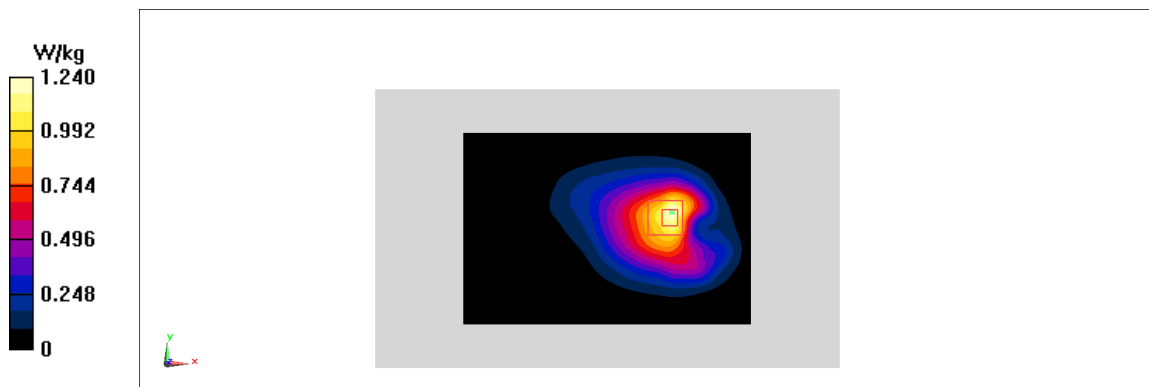
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.85 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.36 W/kg

SAR(1 g) = 0.829 W/kg; SAR(10 g) = 0.493 W/kg

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

**Fig A.4**

WCDMA1900-BII_CH9400 Left Cheek

Date: 3/17/2021

Electronics: DAE4 Sn536

Medium: head 1900 MHz

Medium parameters used: $f = 1880$; $\sigma = 1.409$ mho/m; $\epsilon_r = 40.01$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WCDMA1900-BII 1880 Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(8.33,8.33,8.33)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.624 W/kg

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

Reference Value = 1.8 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.757 W/kg

SAR(1 g) = 0.494 W/kg; SAR(10 g) = 0.306 W/kg

Maximum value of SAR (measured) = 0.669 W/kg

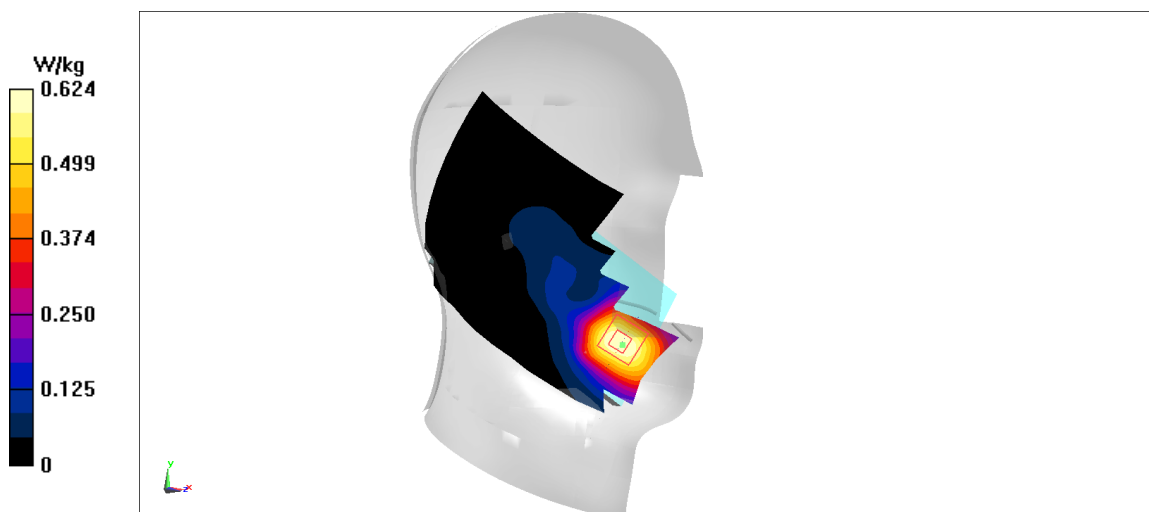


Fig A.5

WCDMA1900-BII_CH9262 Rear

Date: 3/17/2021

Electronics: DAE4 Sn536

Medium: head 1900 MHz

Medium parameters used: $f = 1852.4$; $\sigma = 1.382$ mho/m; $\epsilon_r = 40.05$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WCDMA1900-BII 1852.4 Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(8.33,8.33,8.33)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.07 W/kg

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

Reference Value = 7.38 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.29 W/kg

SAR(1 g) = 0.788 W/kg; SAR(10 g) = 0.452 W/kg

Maximum value of SAR (measured) = 1.1 W/kg

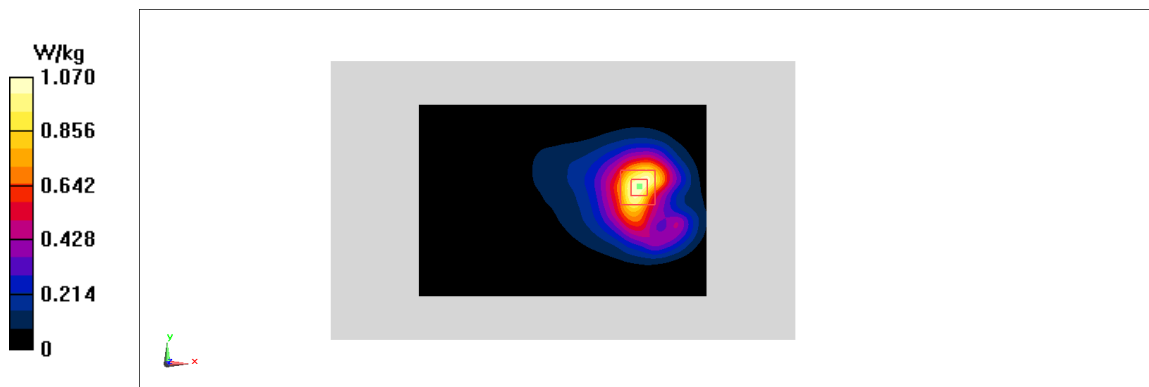


Fig A.6

WCDMA1900-BII_CH9262 Rear

Date: 3/17/2021

Electronics: DAE4 Sn536

Medium: head 1900 MHz

Medium parameters used: $f = 1852.4$; $\sigma = 1.382$ mho/m; $\epsilon_r = 40.05$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WCDMA1900-BII 1852.4 Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(8.33,8.33,8.33)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

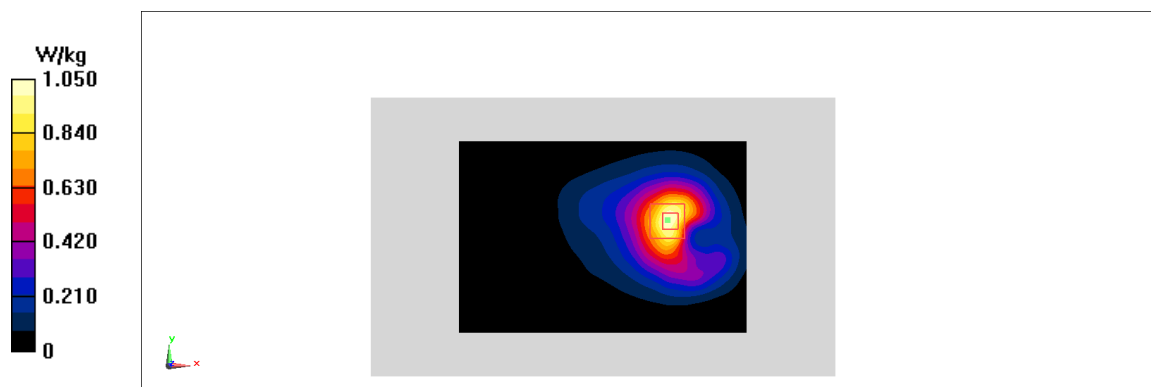
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.356 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.747 W/kg; SAR(10 g) = 0.44 W/kg

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

**Fig A.7**

WCDMA1700-BIV_CH1312 Left Cheek

Date: 3/16/2021

Electronics: DAE4 Sn536

Medium: head 1750 MHz

Medium parameters used: $f = 1712.4$; $\sigma = 1.341$ mho/m; $\epsilon_r = 40.87$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WCDMA1700-BIV 1712.4 Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(8.64,8.64,8.64)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

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

Reference Value = 3.704 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.455 W/kg

SAR(1 g) = 0.296 W/kg; SAR(10 g) = 0.192 W/kg

Maximum value of SAR (measured) = 0.386 W/kg

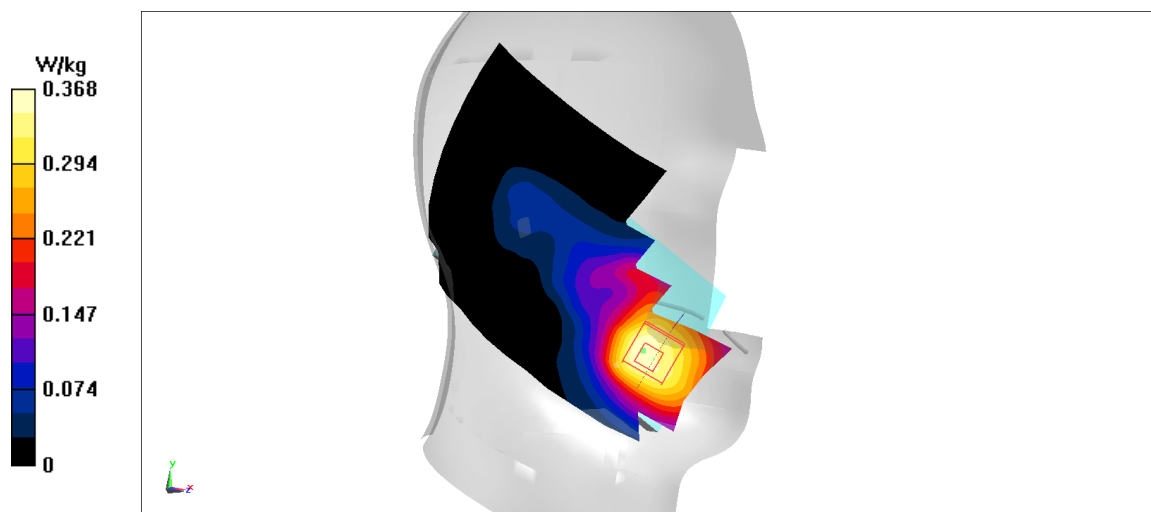


Fig A.8

WCDMA1700-BIV_CH1312 Rear

Date: 3/16/2021

Electronics: DAE4 Sn536

Medium: head 1750 MHz

Medium parameters used: $f = 1712.4$; $\sigma = 1.341$ mho/m; $\epsilon_r = 40.87$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WCDMA1700-BIV 1712.4 Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(8.64,8.64,8.64)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.47 W/kg

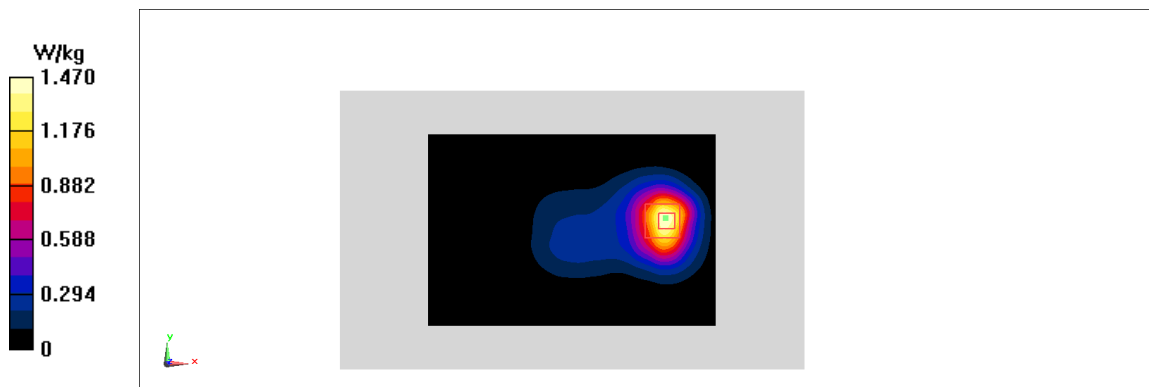
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.97 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 1.71 W/kg

SAR(1 g) = 0.954 W/kg; SAR(10 g) = 0.539 W/kg

Maximum value of SAR (measured) = 1.36 W/kg

**Fig A.9**

WCDMA1700-BIV_CH1312 Rear

Date: 3/16/2021

Electronics: DAE4 Sn536

Medium: head 1750 MHz

Medium parameters used: $f = 1712.4$; $\sigma = 1.341$ mho/m; $\epsilon_r = 40.87$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WCDMA1700-BIV 1712.4 Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(8.64,8.64,8.64)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.1 W/kg

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

Reference Value = 16.02 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.3 W/kg

SAR(1 g) = 0.713 W/kg; SAR(10 g) = 0.407 W/kg

Maximum value of SAR (measured) = 1.07 W/kg

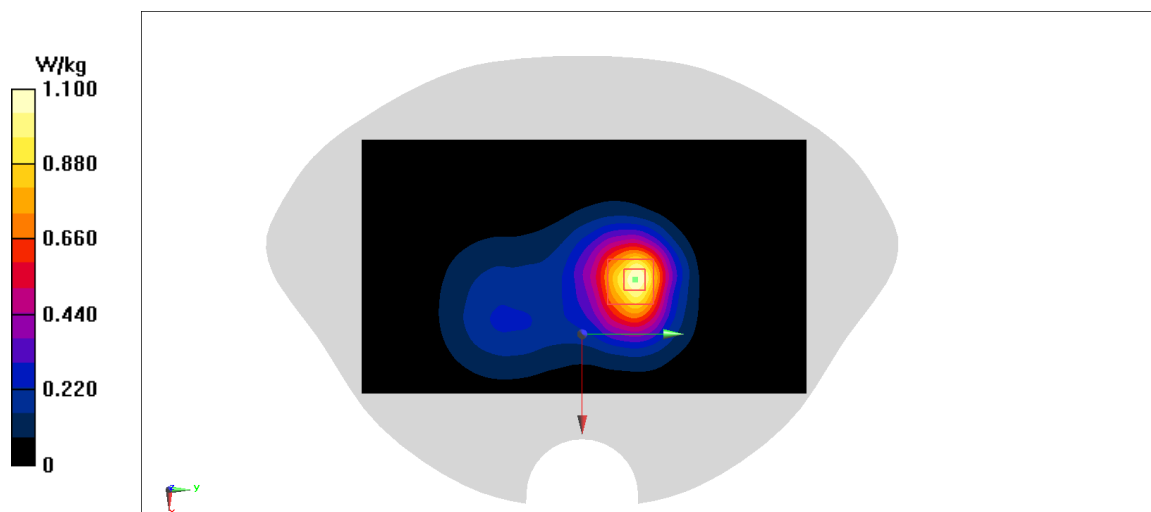


Fig A.10

WCDMA850-BV_CH4233 Right Cheek

Date: 3/15/2021

Electronics: DAE4 Sn536

Medium: head 835 MHz

Medium parameters used: $f = 846.6$; $\sigma = 0.903$ mho/m; $\epsilon_r = 41.09$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WCDMA850-BV 846.6 Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(10.2,10.2,10.2)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.521 W/kg

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

Reference Value = 1.689 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.692 W/kg

SAR(1 g) = 0.342 W/kg; SAR(10 g) = 0.208 W/kg

Maximum value of SAR (measured) = 0.504 W/kg

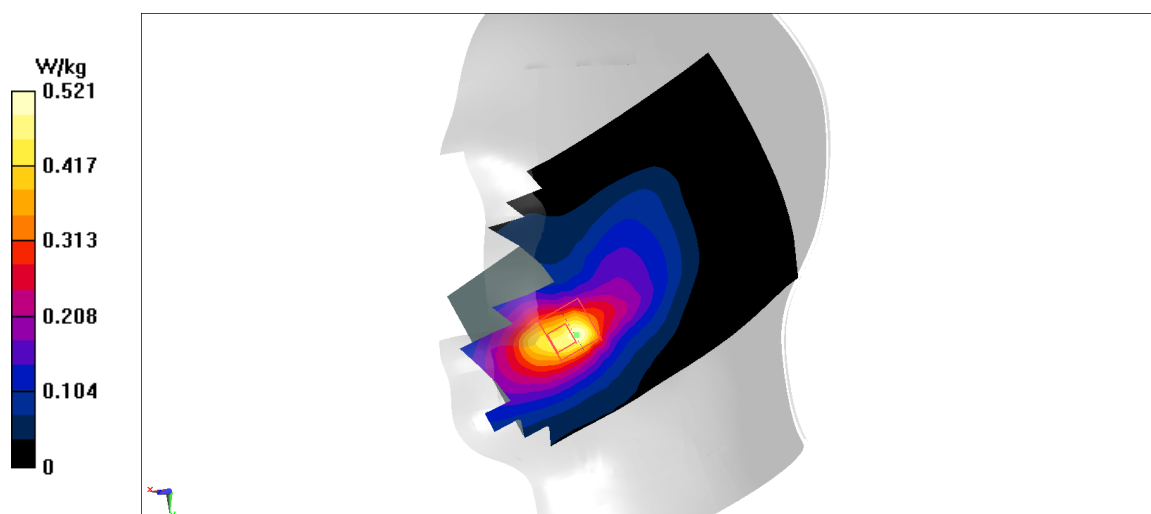


Fig A.11

WCDMA850-BV_CH4132 Rear

Date: 3/15/2021

Electronics: DAE4 Sn536

Medium: head 835 MHz

Medium parameters used: $f = 826.4$; $\sigma = 0.883$ mho/m; $\epsilon_r = 41.11$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WCDMA850-BV 826.4 Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(10.2,10.2,10.2)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.518 W/kg

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

Reference Value = 21.05 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.588 W/kg

SAR(1 g) = 0.409 W/kg; SAR(10 g) = 0.29 W/kg

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

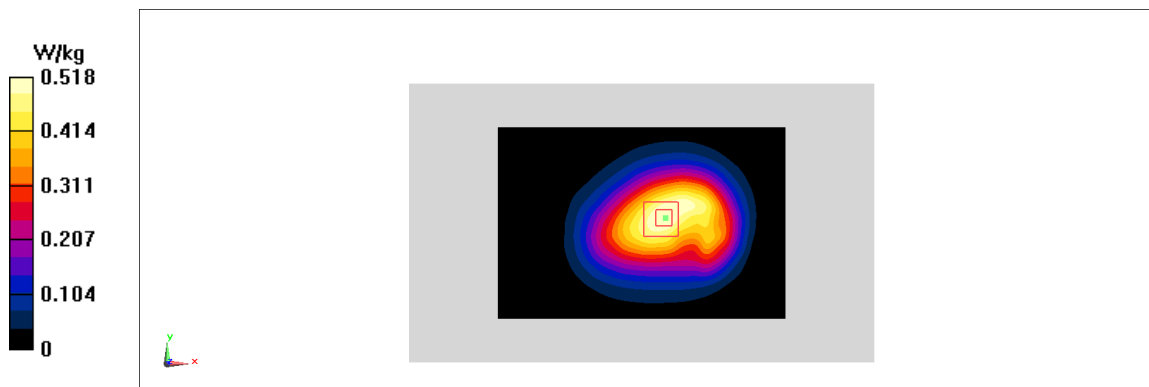


Fig A.12

LTE1900-FDD2_CH19100 Left Cheek

Date: 3/17/2021

Electronics: DAE4 Sn536

Medium: head 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.428$ mho/m; $\epsilon_r = 39.99$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE1900-FDD2 1900 MHz Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(8.33,8.33,8.33)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.822 W/kg

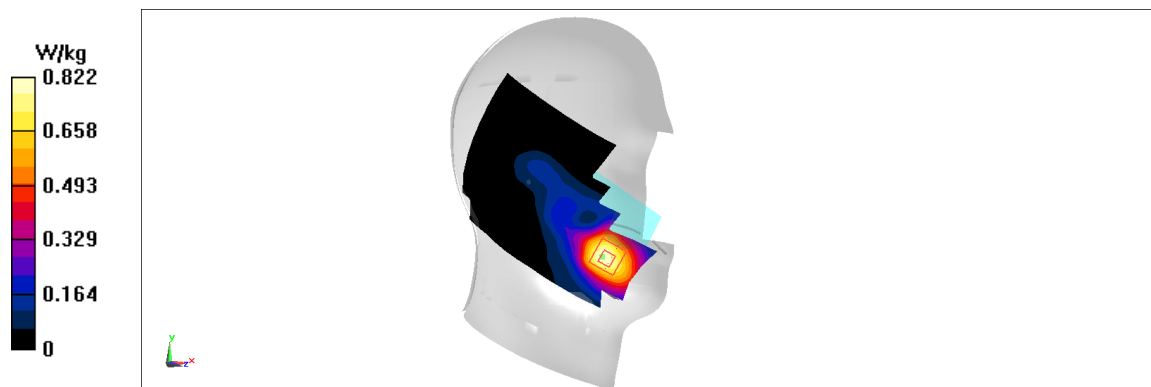
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.32 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.617 W/kg; SAR(10 g) = 0.379 W/kg

Maximum value of SAR (measured) = 0.872 W/kg

**Fig A.13**

LTE1900-FDD2_CH18700 Rear

Date: 3/17/2021

Electronics: DAE4 Sn536

Medium: head 1900 MHz

Medium parameters used: $f = 1860$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 40.04$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE1900-FDD2 1860 MHz Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(8.33,8.33,8.33)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.28 W/kg

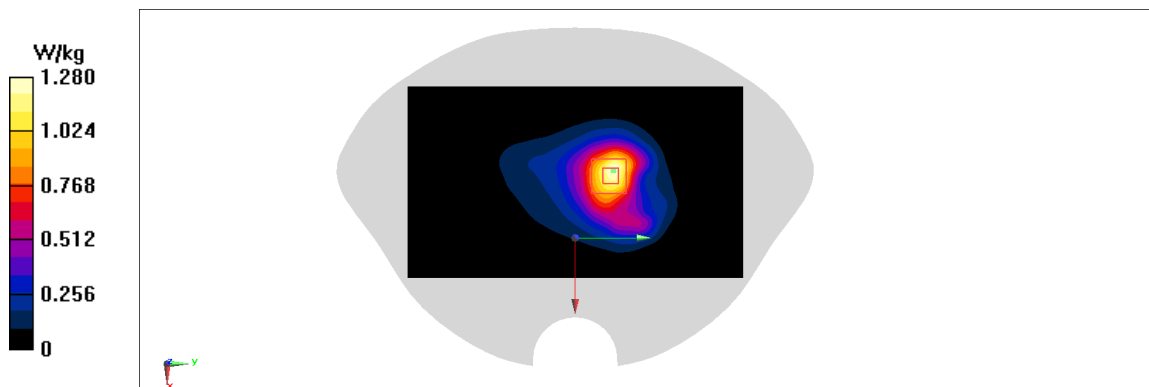
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.3 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.5 W/kg

SAR(1 g) = 0.89 W/kg; SAR(10 g) = 0.509 W/kg

Maximum value of SAR (measured) = 1.24 W/kg

**Fig A.14**

LTE1900-FDD2_CH18700 Rear

Date: 3/17/2021

Electronics: DAE4 Sn536

Medium: head 1900 MHz

Medium parameters used: $f = 1860$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 40.04$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE1900-FDD2 1860 MHz Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(8.33,8.33,8.33)

Area Scan (71x121x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 1.45 W/kg

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

Reference Value = 15.75 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.63 W/kg

SAR(1 g) = 0.973 W/kg; SAR(10 g) = 0.572 W/kg

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

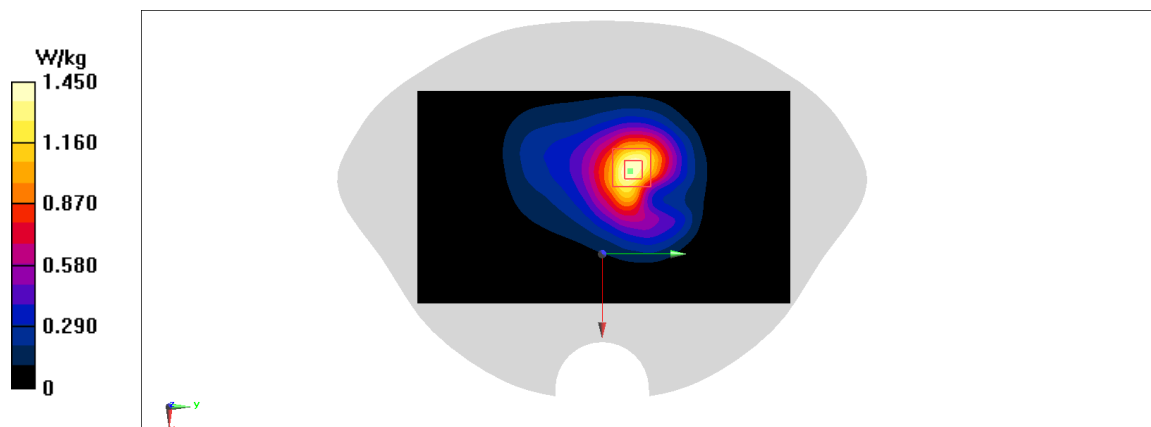


Fig A.15

LTE850-FDD5_CH20600 Right Cheek

Date: 3/15/2021

Electronics: DAE4 Sn536

Medium: head 835 MHz

Medium parameters used: $f = 844$ MHz; $\sigma = 0.901$ mho/m; $\epsilon_r = 41.09$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE850-FDD5 844 MHz Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(10.2,10.2,10.2)

Area Scan (81x141x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.911 W/kg

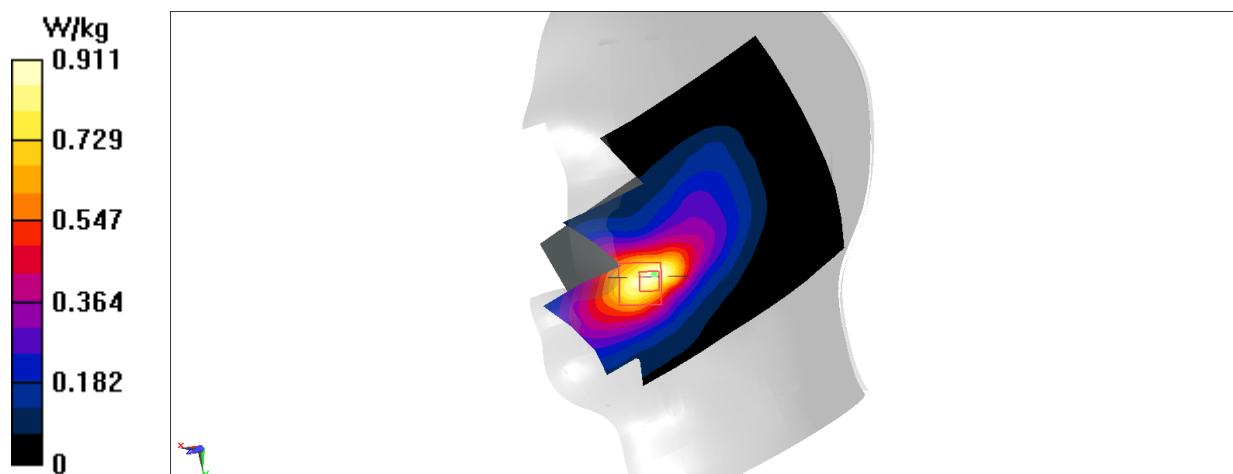
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.309 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.28 W/kg

SAR(1 g) = 0.694 W/kg; SAR(10 g) = 0.426 W/kg

Maximum value of SAR (measured) = 1.04 W/kg

**Fig A.16**

LTE850-FDD5_CH20450 Rear

Date: 3/15/2021

Electronics: DAE4 Sn536

Medium: head 835 MHz

Medium parameters used: $f = 829$ MHz; $\sigma = 0.886$ mho/m; $\epsilon_r = 41.11$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE850-FDD5 829 MHz Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(10.2,10.2,10.2)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.27 W/kg

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

Reference Value = 28.36 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 0.971 W/kg; SAR(10 g) = 0.686 W/kg

Maximum value of SAR (measured) = 1.24 W/kg

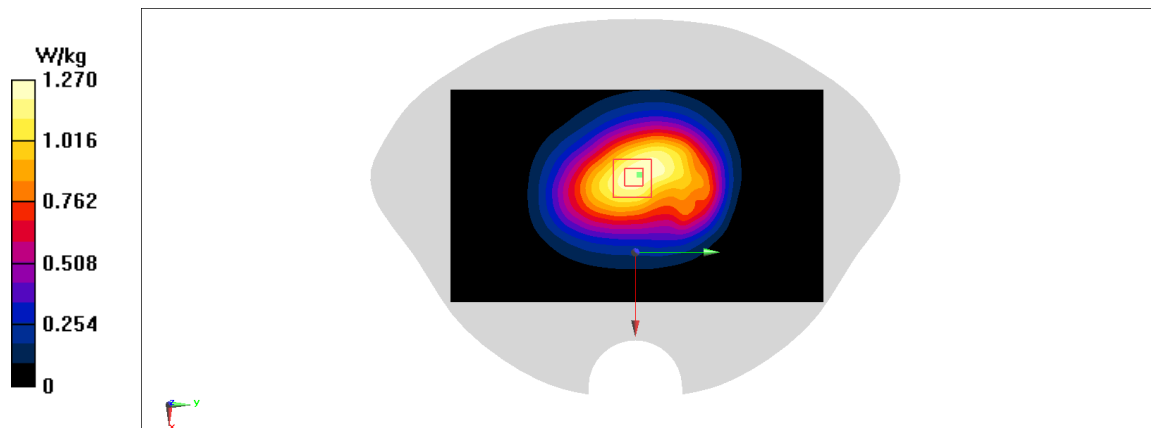


Fig A.17

LTE2500-FDD7_CH20850 Left Cheek

Date: 3/19/2021

Electronics: DAE4 Sn536

Medium: head 2600 MHz

Medium parameters used: $f = 2510$ MHz; $\sigma = 1.84$ mho/m; $\epsilon_r = 39.17$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE2500-FDD7 2510 MHz Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(7.61,7.61,7.61)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.816 W/kg

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

Reference Value = 4.852 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.622 W/kg; SAR(10 g) = 0.323 W/kg

Maximum value of SAR (measured) = 0.852 W/kg

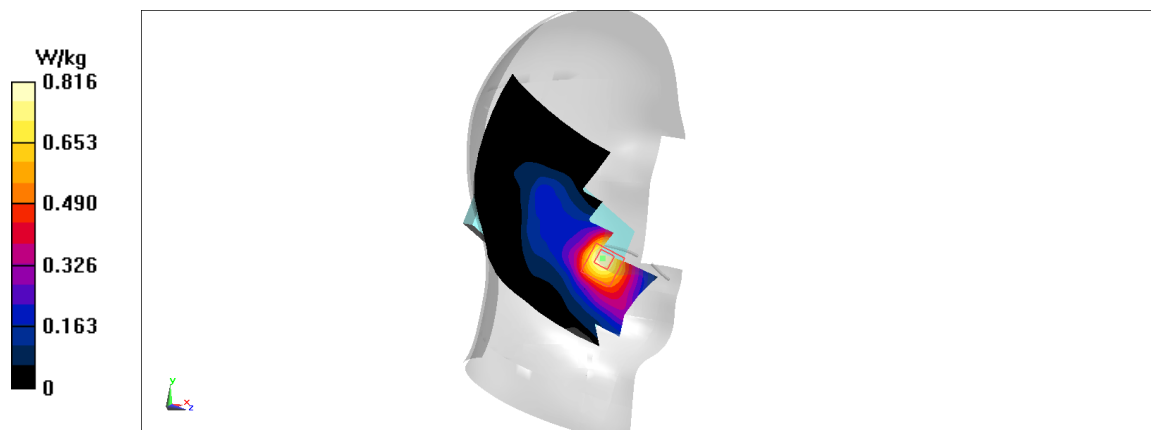


Fig A.18

LTE2500-FDD7_CH21100 Rear unfold

Date: 3/19/2021

Electronics: DAE4 Sn536

Medium: head 2600 MHz

Medium parameters used: $f = 2535$ MHz; $\sigma = 1.863$ mho/m; $\epsilon_r = 39.14$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE2500-FDD7 2535 MHz Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(7.61,7.61,7.61)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.858 W/kg

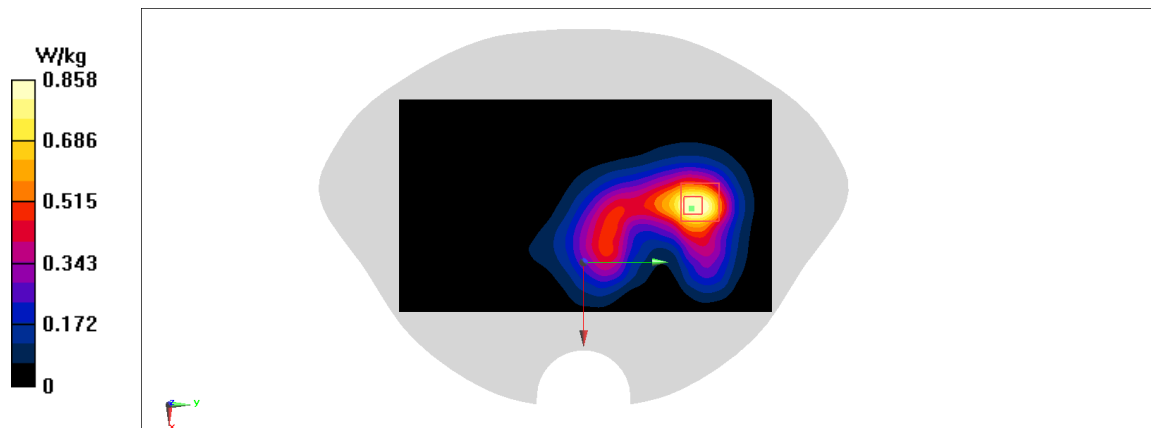
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.02 V/m; Power Drift = -0.1 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.53 W/kg; SAR(10 g) = 0.285 W/kg

Maximum value of SAR (measured) = 0.859 W/kg

**Fig A.19**

LTE2500-FDD7_CH20850 Rearunfold

Date: 3/19/2021

Electronics: DAE4 Sn536

Medium: head 2600 MHz

Medium parameters used: $f = 2510$ MHz; $\sigma = 1.84$ mho/m; $\epsilon_r = 39.17$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE2500-FDD7 2510 MHz Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(7.61,7.61,7.61)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.07 W/kg

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

Reference Value = 17.37 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.638 W/kg; SAR(10 g) = 0.349 W/kg

Maximum value of SAR (measured) = 0.998 W/kg

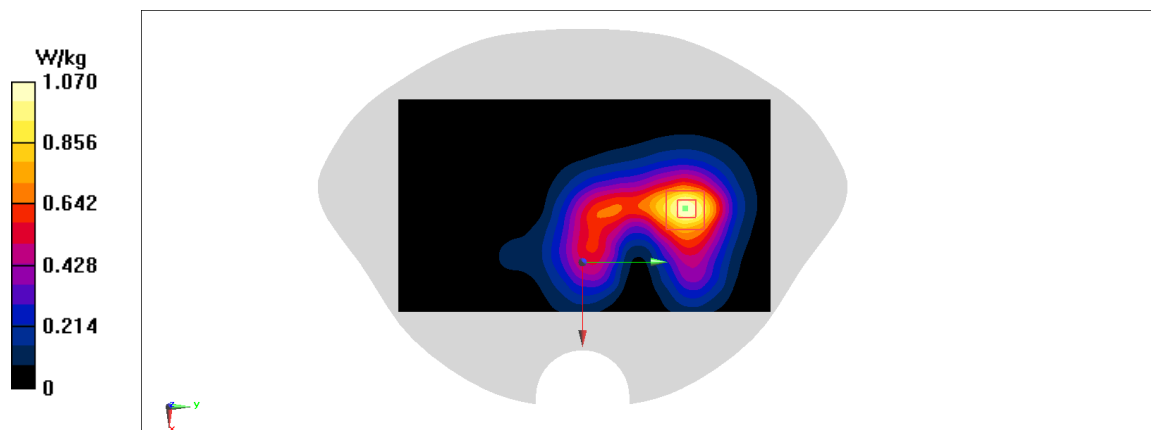


Fig A.20

LTE700-FDD12_CH23130 Right Cheek

Date: 3/14/2021

Electronics: DAE4 Sn536

Medium: head 750 MHz

Medium parameters used: $f = 711$ MHz; $\sigma = 0.851$ mho/m; $\epsilon_r = 41.4$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE700-FDD12 711 MHz Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(10.41,10.41,10.41)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.21 W/kg

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

Reference Value = 1.896 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.231 W/kg

SAR(1 g) = 0.129 W/kg; SAR(10 g) = 0.0849 W/kg

Maximum value of SAR (measured) = 0.185 W/kg

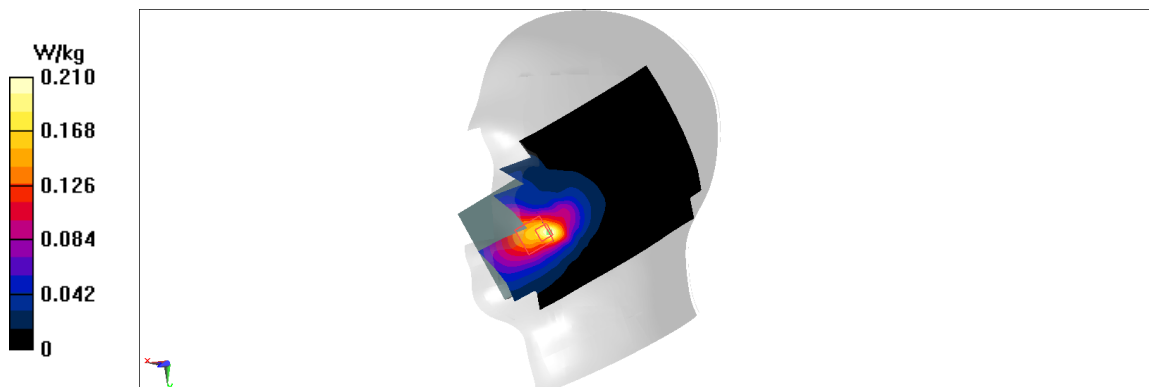


Fig A.21

LTE700-FDD12_CH23060 Rear unfold

Date: 3/14/2021

Electronics: DAE4 Sn536

Medium: head 750 MHz

Medium parameters used: $f = 704$ MHz; $\sigma = 0.844$ mho/m; $\epsilon_r = 41.41$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE700-FDD12 704 MHz Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(10.41,10.41,10.41)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.423 W/kg

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

Reference Value = 15.82 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.438 W/kg

SAR(1 g) = 0.321 W/kg; SAR(10 g) = 0.234 W/kg

Maximum value of SAR (measured) = 0.396 W/kg

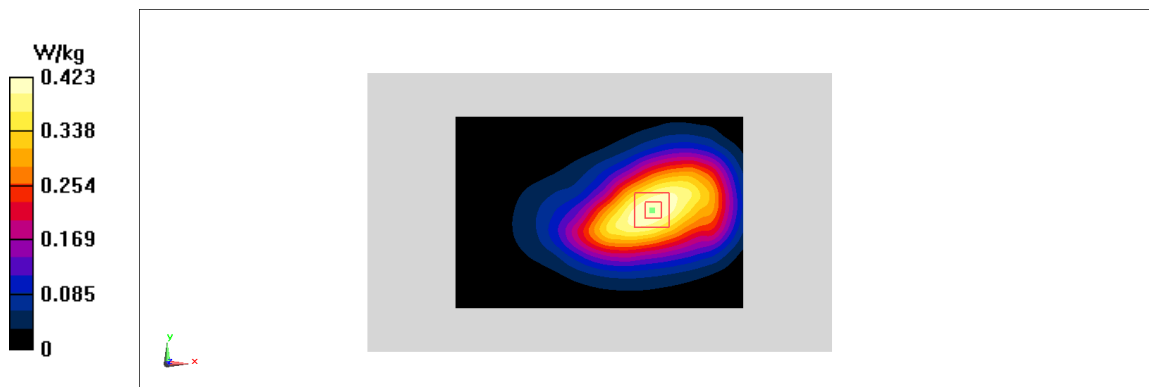


Fig A.22

LTE750-FDD13_CH23230 Left Cheek

Date: 3/14/2021

Electronics: DAE4 Sn536

Medium: head 750 MHz

Medium parameters used: $f = 782 \text{ MHz}$; $\sigma = 0.918 \text{ mho/m}$; $\epsilon_r = 41.31$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.5°C , Liquid Temperature: 22.3°C

Communication System: LTE750-FDD13 782 MHz Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(10.41,10.41,10.41)

Area Scan (71x121x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.431 W/kg

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

Reference Value = 5.459 V/m ; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.541 W/kg

SAR(1 g) = 0.345 W/kg ; SAR(10 g) = 0.221 W/kg

SAR(1 g) = 0.345 W/kg ; SAR(10 g) = 0.221 W/kg

Maximum value of SAR (measured) = 0.465 W/kg

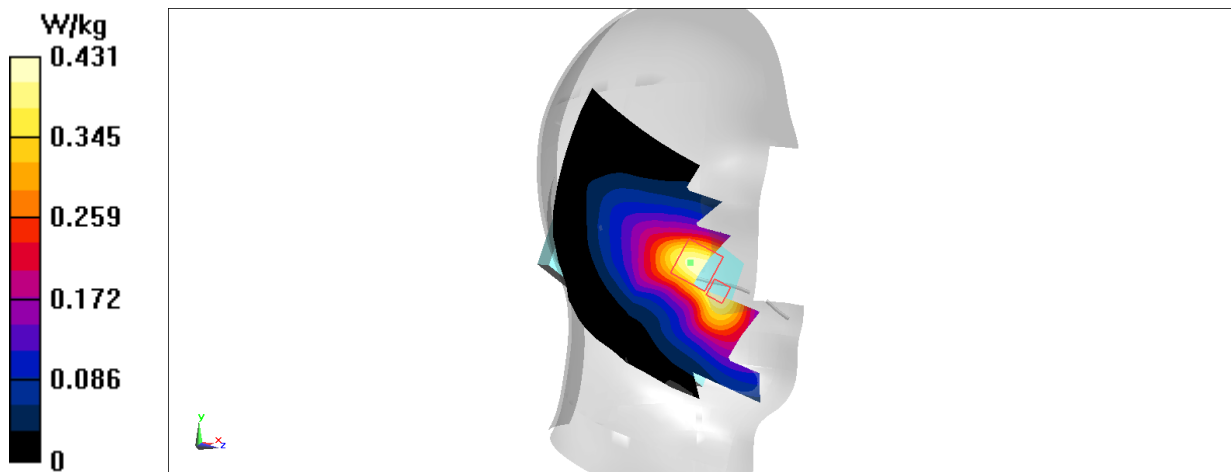


Fig A.23

LTE750-FDD13_CH23230 Rear

Date: 3/14/2021

Electronics: DAE4 Sn536

Medium: head 750 MHz

Medium parameters used: $f = 782$ MHz; $\sigma = 0.918$ mho/m; $\epsilon_r = 41.31$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE750-FDD13 782 MHz Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(10.41,10.41,10.41)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.46 W/kg

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

Reference Value = 32.1 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 1.57 W/kg

SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.729 W/kg

Maximum value of SAR (measured) = 1.39 W/kg

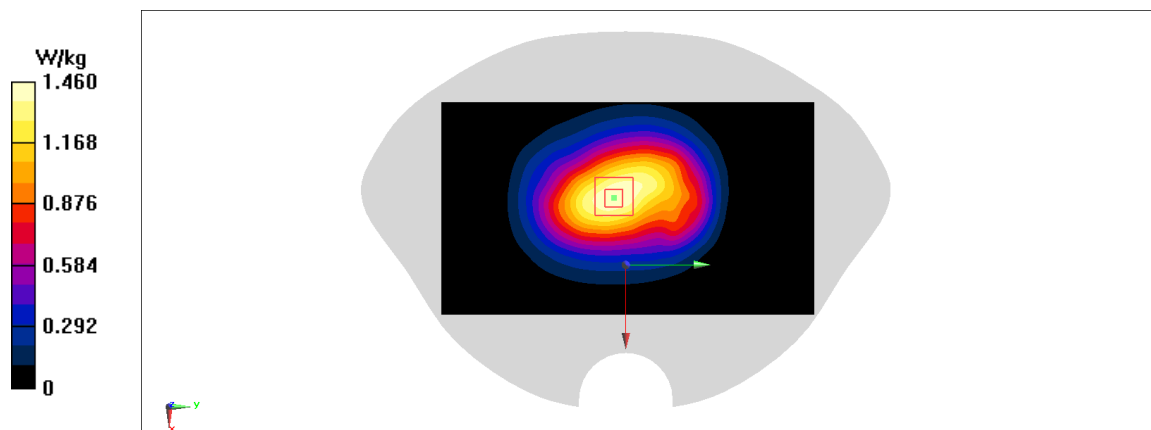


Fig A.24

LTE1700-FDD66_CH132572 Left Cheek

Date: 3/16/2021

Electronics: DAE4 Sn536

Medium: head 1750 MHz

Medium parameters used: $f = 1770$ MHz; $\sigma = 1.396$ mho/m; $\epsilon_r = 40.76$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE1700-FDD66 1770 MHz Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(8.64,8.64,8.64)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.352 W/kg

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

Reference Value = 5.817 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 0.429 W/kg

SAR(1 g) = 0.267 W/kg; SAR(10 g) = 0.165 W/kg

Maximum value of SAR (measured) = 0.358 W/kg

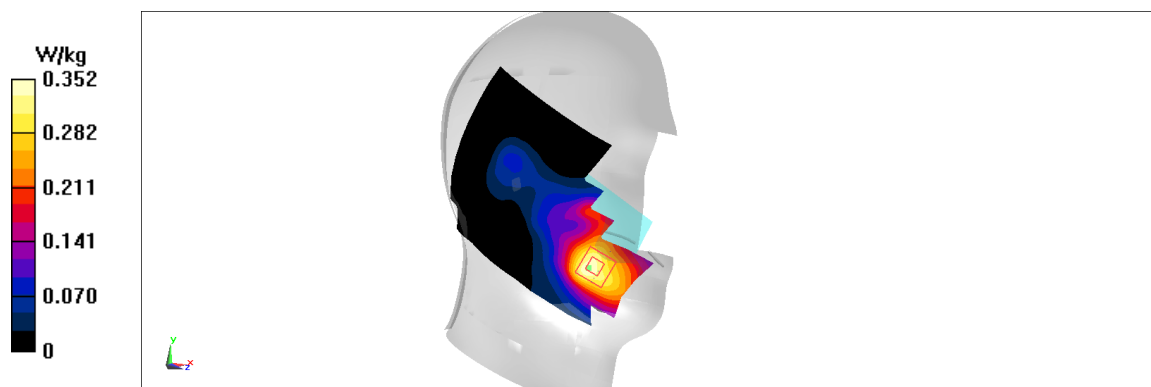


Fig A.25

LTE1700-FDD66_CH132072 Rear

Date: 3/16/2021

Electronics: DAE4 Sn536

Medium: head 1750 MHz

Medium parameters used: $f = 1720$ MHz; $\sigma = 1.361$ mho/m; $\epsilon_r = 40.89$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE1700-FDD66 1720 MHz Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(8.64,8.64,8.64)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.24 W/kg

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

Reference Value = 11.15 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.48 W/kg

SAR(1 g) = 0.815 W/kg; SAR(10 g) = 0.457 W/kg

Maximum value of SAR (measured) = 1.19 W/kg

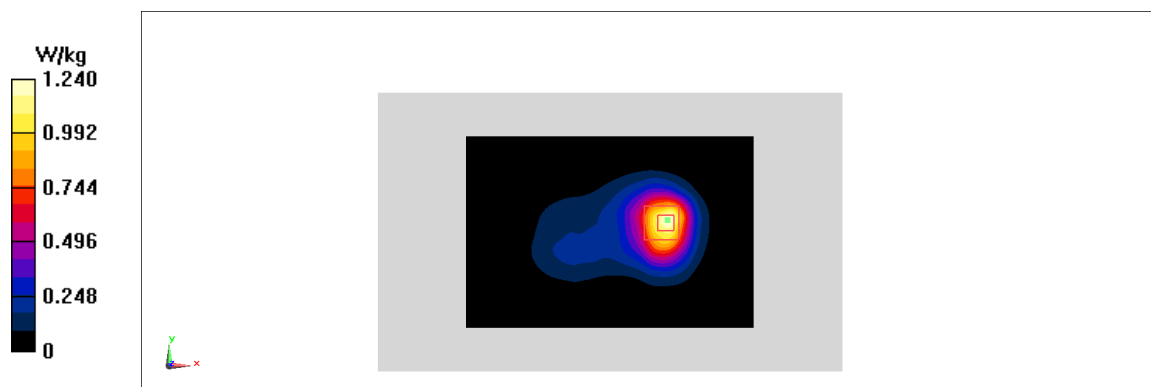


Fig A.26

LTE1700-FDD66_CH132072 Rear

Date: 3/16/2021

Electronics: DAE4 Sn536

Medium: head 1750 MHz

Medium parameters used: $f = 1720$ MHz; $\sigma = 1.361$ mho/m; $\epsilon_r = 40.89$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: LTE1700-FDD66 1720 MHz Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(8.64,8.64,8.64)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.939 W/kg

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

Reference Value = 11.89 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.659 W/kg; SAR(10 g) = 0.386 W/kg

Maximum value of SAR (measured) = 0.938 W/kg

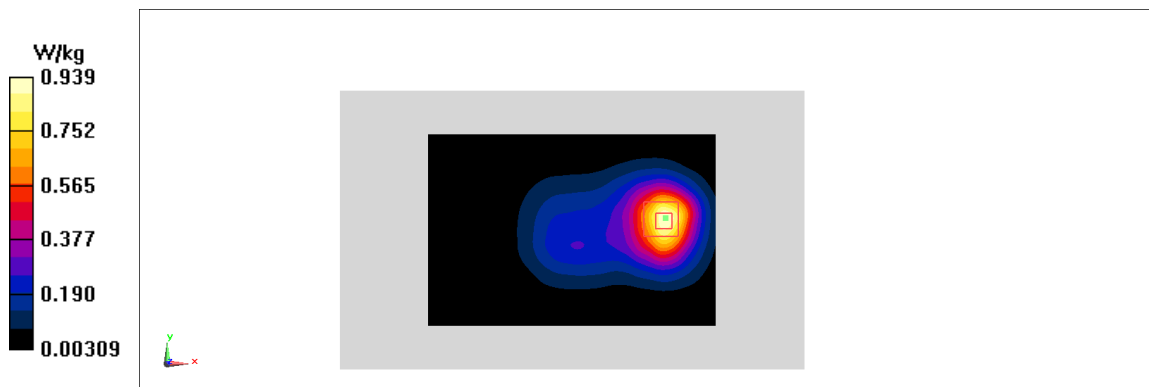


Fig A.27

WLAN2450_CH11 Right Cheek

Date: 3/18/2021

Electronics: DAE4 Sn536

Medium: head 2450 MHz

Medium parameters used: $f = 2462$; $\sigma = 1.791$ mho/m; $\epsilon_r = 38.98$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WLAN2450 2462 Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(7.77,7.77,7.77)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.481 W/kg

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

Reference Value = 5.039 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.958 W/kg

SAR(1 g) = 0.307 W/kg; SAR(10 g) = 0.168 W/kg

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

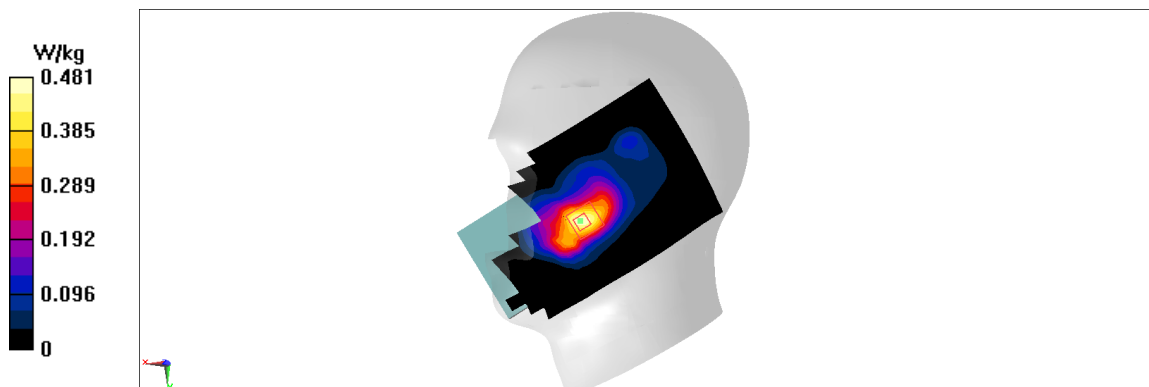


Fig A.28

WLAN2450_CH11 Rear unfold

Date: 3/18/2021

Electronics: DAE4 Sn536

Medium: head 2450 MHz

Medium parameters used: $f = 2462$; $\sigma = 1.791$ mho/m; $\epsilon_r = 38.98$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WLAN2450 2462 Duty Cycle: 1: 1

Probe: EX3DV4 – SN7307 ConvF(7.77,7.77,7.77)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.195 W/kg

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

Reference Value = 3.182 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.216 W/kg

SAR(1 g) = 0.111 W/kg; SAR(10 g) = 0.06 W/kg

Maximum value of SAR (measured) = 0.172 W/kg

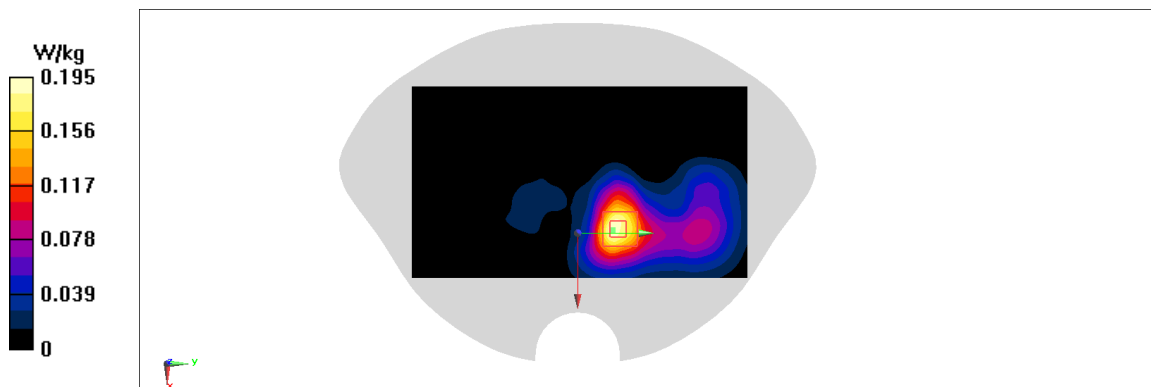


Fig A.29

I.6 System Verification Results

750 MHz

Date: 3/14/2021

Electronics: DAE4 Sn536

Medium: Head 750 MHz

Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.888 \text{ mho/m}$; $\epsilon_r = 41.35$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.5°C Liquid Temperature: 22.3°C

Communication System: CW Frequency: 750 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7307 ConvF(10.41,10.41,10.41)

System Validation /Area Scan (81x191x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 60.48 V/m ; Power Drift = -0.08

Fast SAR: SAR(1 g) = 2.12 W/kg ; SAR(10 g) = 1.37 W/kg

Maximum value of SAR (interpolated) = 2.85 W/kg

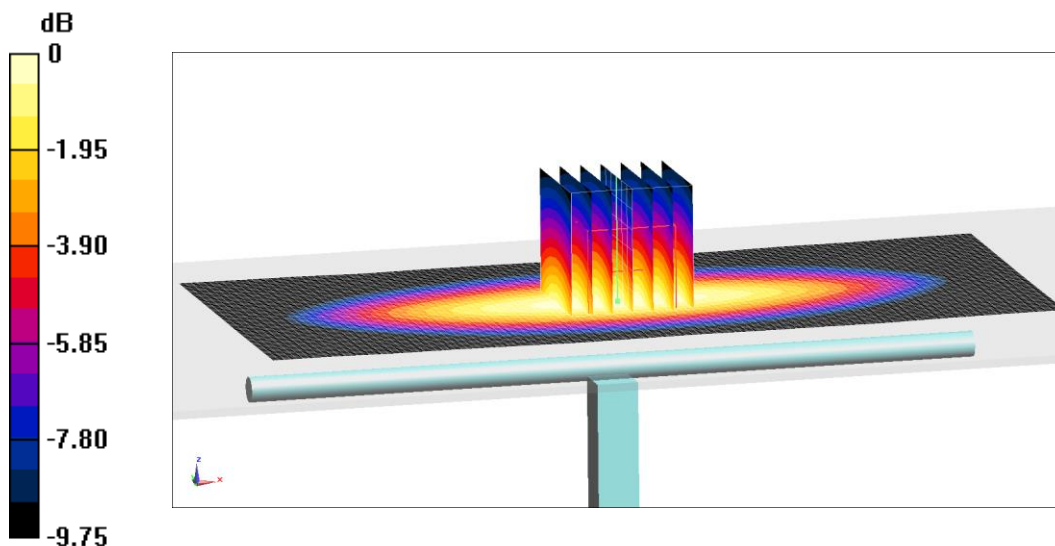
System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 60.48 V/m ; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 3.25 W/kg

SAR(1 g) = 2.13 W/kg ; SAR(10 g) = 1.41 W/kg

Maximum value of SAR (measured) = 2.86 W/kg



$0 \text{ dB} = 2.86 \text{ W/kg} = 4.56 \text{ dB W/kg}$

Fig.B.1 validation 750 MHz 250mW

835 MHz

Date: 3/15/2021

Electronics: DAE4 Sn536

Medium: Head 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.892 \text{ mho/m}$; $\epsilon_r = 41.1$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.5°C Liquid Temperature: 22.3°C

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

Probe: EX3DV4 – SN7307 ConvF(10.2,10.2,10.2)

System Validation /Area Scan (81x191x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 61.96 V/m; Power Drift = 0.06

Fast SAR: SAR(1 g) = 2.38 W/kg; SAR(10 g) = 1.53 W/kg

Maximum value of SAR (interpolated) = 3.19 W/kg

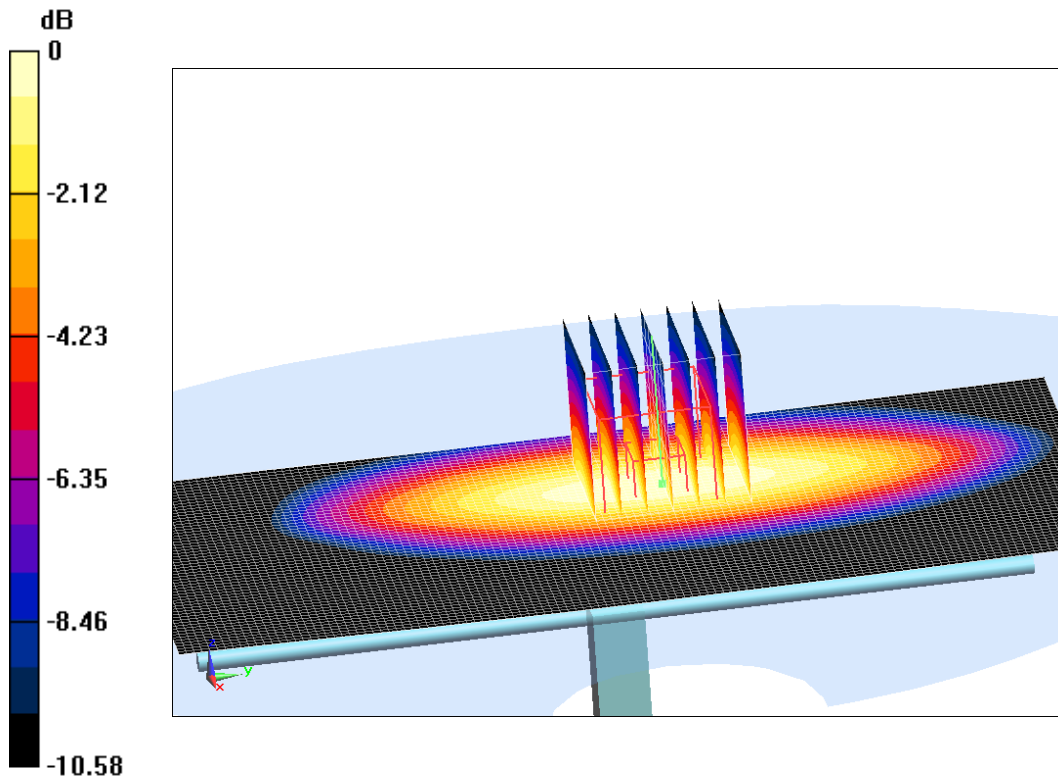
System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 61.96 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 3.61 W/kg

SAR(1 g) = 2.37 W/kg; SAR(10 g) = 1.57 W/kg

Maximum value of SAR (measured) = 3.32 W/kg



0 dB = 3.32 W/kg = 5.21 dB W/kg

Fig.B.2 validation 835 MHz 250mW