14.2 SAR results for Standard procedure

There is zoom scan measurement to be added for the highest measured SAR in each exposure configuration/band.

Table 14.2-1: SAR Values (GSM 850 MHz Band - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
190	836.6	Left	Touch	Fig.1	31.02	32	0.16	**0.20**	0.213	**0.27**	0.02

Table 14.2-2: SAR Values (GSM 850 MHz Band - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode (number of timeslots)	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
251	848.8	GPRS (2)	Rear	Fig.2	28.91	29.5	0.287	**0.33**	0.381	**0.44**	-0.11

Note: The distance between the EUT and the phantom bottom is 10mm.

Table 14.2-3: SAR Values (GSM 1900 MHz Band - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
512	1850.2	Right	Touch	Fig.3	28.94	29.5	0.085	**0.10**	0.132	**0.15**	-0.04

Table 14.2-4: SAR Values (GSM 1900 MHz Band - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode (number of timeslots)	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
810	1909.8	GPRS (2)	Rear	Fig.4	26.22	26.5	0.15	**0.16**	0.266	**0.28**	0.12

Note: The distance between the EUT and the phantom bottom is 15mm

Table 14.2-5: SAR Values (GSM 1900 MHz Band - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode (number of timeslots)	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
661	1880	GPRS (1)	Bottom	Fig.5	27.88	29	0.326	**0.42**	0.646	**0.84**	-0.04

Note: The distance between the EUT and the phantom bottom is 10mm

Table 14.2-6: SAR Values (WCDMA 1900 MHz Band - Head)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
9538	1907.6	Left	Touch	Fig.6	23.07	23.2	0.211	**0.22**	0.326	**0.34**	0.15

Table 14.2-7: SAR Values (WCDMA 1900 MHz Band - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C										
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
9538	1907.6	Rear	Fig.7	23.12	23.2	0.18	**0.18**	0.31	**0.32**	0.08

Note: The distance between the EUT and the phantom bottom is 15mm

Table 14.2-8: SAR Values (WCDMA 1900 MHz Band - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C										
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
9262	1852.4	Bottom	Fig.8	19.38	20.5	0.526	**0.68**	1.03	**1.33**	-0.06

Note: The distance between the EUT and the phantom bottom is 10mm

Table 14.2-9: SAR Values (WCDMA 1700 MHz Band - Head)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
1412	1732.4	Left	Touch	Fig.9	22.98	23.2	0.109	**0.11**	0.166	**0.17**	0.04

Table 14.2-10: SAR Values (WCDMA 1700 MHz Band - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C										
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
1312	1712.4	Rear	Fig.10	22.97	23.2	0.302	**0.32**	0.508	**0.54**	0.12

Note: The distance between the EUT and the phantom bottom is 15mm

Table 14.2-11: SAR Values (WCDMA 1700 MHz Band - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C										
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
1412	1732.5	Bottom	Fig.11	19.38	20.5	0.508	**0.66**	0.97	**1.26**	0.09

Note: The distance between the EUT and the phantom bottom is 10mm

Table 14.2-12: SAR Values (WCDMA 850 MHz Band - Head)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
4183	836.6	Right	Touch	Fig.12	23.12	23.5	0.256	**0.28**	0.338	**0.37**	0.07

Table 14.2-13: SAR Values (WCDMA 850 MHz Band - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C										
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
4183	836.6	Rear	Fig.13	23.12	23.5	0.328	**0.36**	0.438	**0.48**	0.01

Note: The distance between the EUT and the phantom bottom is 10mm.

Table 14.2-14: SAR Values (LTE Band2 - Head)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C												
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
19100	1900	1RB_Mid	Left	Touch	Fig.14	22.98	23	0.172	**0.17**	0.266	**0.27**	-0.18

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-15: SAR Values (LTE Band2 - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C											
Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
18700	1860	50RB_High	Rear	Fig.15	21.99	22	0.198	**0.20**	0.347	**0.35**	-0.01

Note: The distance between the EUT and the phantom bottom is 15mm.

Table 14.2-16: SAR Values (LTE Band2 - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
19100	1900	50RB_High	Bottom	Fig.16	19.06	20	0.328	**0.41**	0.637	**0.79**	0.12

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The LTE mode is QPSK_20MHz.

Table 14.2-17: SAR Values (LTE Band5 - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
20600	844	1RB_Mid	Left	Touch	Fig.17	23.21	23.5	0.201	**0.21**	0.265	**0.28**	-0.07

Note: The LTE mode is QPSK_10MHz.

Table 14.2-18: SAR Values (LTE Band5 - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
20600	844	1RB_Middle	Rear	Fig.18	23.21	23.5	0.274	**0.29**	0.364	**0.39**	-0.13

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2:The LTE mode is QPSK_10MHz.

Table 14.2-19: SAR Values (LTE Band7 - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
20850	2510	1RB_Mid	Right	Touch	Fig.19	22.96	23.5	0.112	**0.13**	0.213	**0.24**	0.07

Note: The LTE mode is QPSK_20MHz.

Table 14.2-20: SAR Values (LTE Band7 - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
20850	2510	1RB_Mid	Rear	Fig.20	22.96	23.5	0.178	**0.20**	0.354	**0.40**	-0.03

Note1: The distance between the EUT and the phantom bottom is 15mm

Note2: The LTE mode is QPSK_20MHz.

Table 14.2-21: SAR Values (LTE Band7 - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
21350	2560	1RB_Mid	Rear	Fig.21	19.09	19.5	0.151	**0.17**	0.341	**0.37**	-0.16

Note1: The distance between the EUT and the phantom bottom is 10mm

Note2: The LTE mode is QPSK_20MHz.

Table 14.2-22: SAR Values (LTE Band12 - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
23130	711	1RB_Mid	Left	Touch	Fig.22	23.19	23.6	0.151	**0.17**	0.195	**0.21**	-0.01

Note: The LTE mode is QPSK_10MHz.

Table 14.2-23: SAR Values (LTE Band12 - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
23130	711	1RB_Mid	Rear	Fig.23	23.19	23.6	0.274	**0.30**	0.369	**0.41**	-0.07

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The LTE mode is QPSK_10MHz.

Table 14.2-24: SAR Values (LTE Band13 - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
23230	782	1RB_ Mid	Right	Touch	Fig.24	22.88	23.6	0.175	**0.21**	0.231	**0.27**	0.08

Note: The LTE mode is QPSK_10MHz.

Table 14.2-25: SAR Values (LTE Band13 - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
23230	782	1RB_ Mid	Rear	Fig.25	22.88	23.6	0.266	**0.31**	0.354	**0.42**	-0.06

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The LTE mode is QPSK_10MHz.

Table 14.2-26: SAR Values (LTE Band66 - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
132072	1720	1RB_Mid	Left	Touch	Fig.26	23.11	23.8	0.106	**0.12**	0.167	**0.20**	-0.09

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-27: SAR Values (LTE Band66 - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
132072	1720	1RB_Mid	Rear	Fig.27	23.11	23.8	0.474	**0.56**	0.834	**0.98**	-0.03

Note: The distance between the EUT and the phantom bottom is 15mm. The LTE mode is QPSK_20MHz.

Table 14.2-28: SAR Values (LTE Band66 - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
132322	1745	50RB_High	Bottom	Fig.28	18.99	20	0.53	**0.67**	1.02	**1.29**	-0.08

Note: The distance between the EUT and the phantom bottom is 10mm. The LTE mode is QPSK_20MHz.

14.3 WLAN Evaluation for 2.4G

According to the KDB248227 D01, SAR is measured for 2.4GHz 802.11b DSSS using the initial test position procedure.

Head Evaluation

Table 14.3-1: SAR Values (WLAN - Head)– 802.11b (Fast SAR)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
2462	11	Left	Touch	/	16.87	18	0.098	**0.13**	0.191	**0.25**	0.02
2462	11	Left	Tilt	/	16.87	18	0.084	**0.11**	0.175	**0.23**	0.05
2462	11	Right	Touch	/	16.87	18	0.068	**0.09**	0.133	**0.17**	-0.07
2462	11	Right	Tilt	/	16.87	18	0.068	**0.09**	0.132	**0.17**	0.02

As shown above table, the initial test position for head is “Left Touch”. So the head SAR of WLAN is presented as below:

Table 14.3-2: SAR Values (WLAN - Head)– 802.11b (Full SAR)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
2462	11	Left	Touch	Fig.29	16.87	18	0.1	**0.13**	0.192	**0.25**	0.02
Note1: When the reported SAR of the initial test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position using subsequent highest estimated 1-g SAR conditions determined by area scans, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg. Note2: For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.										

According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit. The scaled reported SAR is presented as below.

Table 14.3-3: SAR Values (WLAN - Head) – 802.11b (Scaled Reported SAR)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃							
Frequency		Side	Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
MHz	Ch.						
2462	11	Left	Touch	100%	100%	**0.25**	**0.25**

SAR is not required for OFDM because the 802.11b adjusted SAR ≤ 1.2 W/kg.

Body Evaluation

Table 14.3-4: SAR Values (WLAN - Body)– 802.11b (Fast SAR)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃										
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.									
2462	11	Front	/	16.87	18	0.03	**0.04**	0.056	**0.07**	0.01
2462	11	Rear	/	16.87	18	0.054	**0.07**	0.115	**0.15**	0.08
2462	11	Left	/	16.87	18	0.016	**0.02**	0.03	**0.04**	-0.09
2462	11	Top	/	16.87	18	0.046	**0.06**	0.091	**0.12**	-0.07

As shown above table, the initial test position for body is “Rear”. So the body SAR of WLAN is presented as below:

Table 14.3-5: SAR Values (WLAN - Body)– 802.11b (Full SAR)

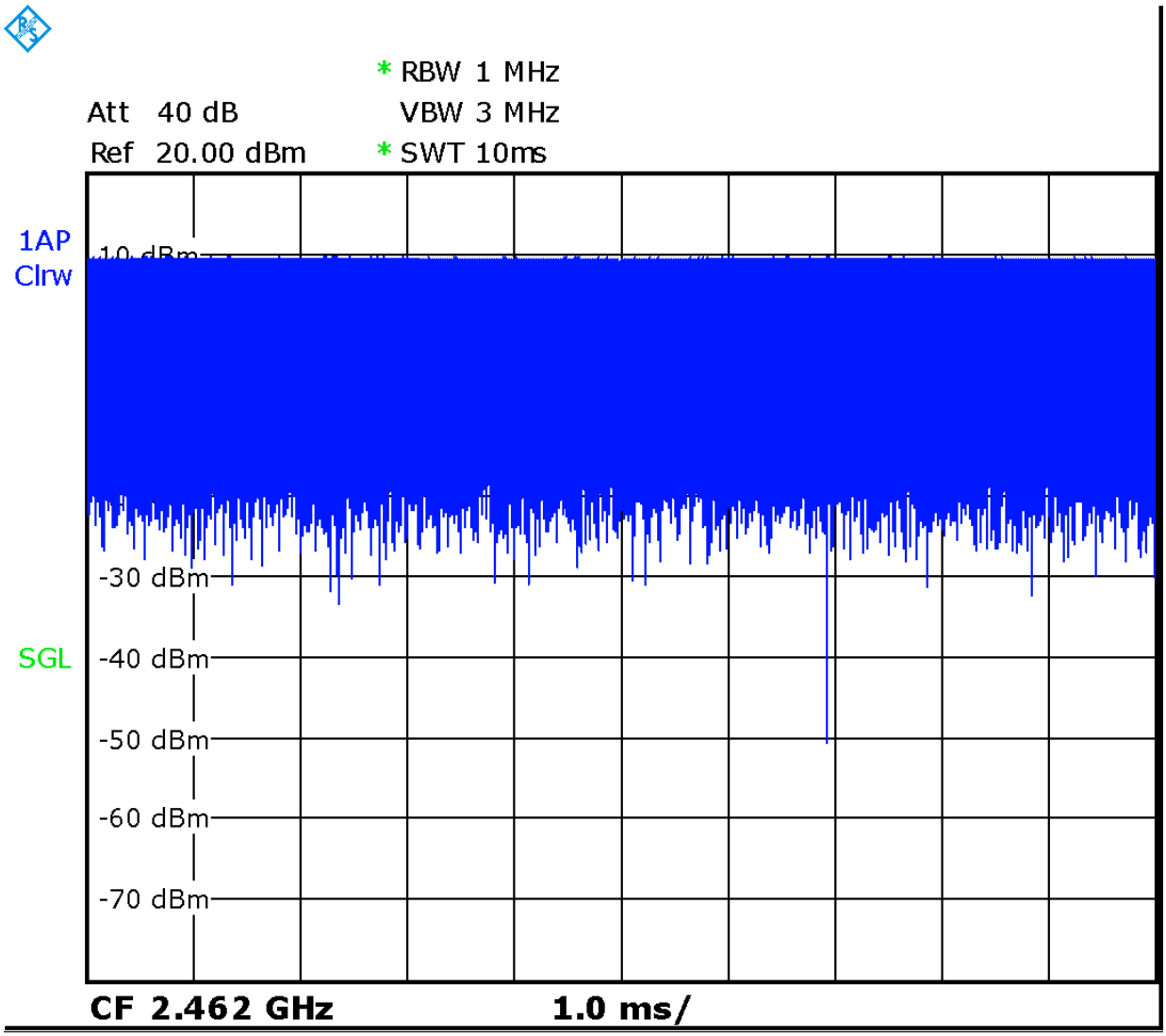
Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃										
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.									
2462	11	Rear	Fig.30	16.87	18	0.053	**0.07**	0.117	**0.15**	0.08
Note1: When the reported SAR of the initial test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position using subsequent highest estimated 1-g SAR conditions determined by area scans, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg. Note2: For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.										

According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit. The scaled reported SAR is presented as below.

Table 14.3-6: SAR Values (WLAN - Body) – 802.11b (Scaled Reported SAR)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃						
Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
MHz	Ch.					
2462	11	Rear	100%	100%	**0.15**	**0.15**

SAR is not required for OFDM because the 802.11b adjusted SAR ≤ 1.2 W/kg.



Picture 14.1 Duty factor plot

14.4 WLAN Evaluation For 5G

Table 14.4-1: OFDM mode specified maximum output power of WLAN antenna

802.11 mode	a	g	n		ac			
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	X		X	X	X	X	X	
U-NII-2A	X		X	X	X	X	X	
U-NII-2C	X		X	X	X	X	X	
U-NII-3	X		X	X	X	X	X	
§ 15.247 (5.8/ GHz)								
X: maximum(conducted) output power(mW), including tolerance, specified for production units								

Table 14.4-2: Maximum output power specified of WLAN antenna-Head&Body

802.11 mode	a	g	n		ac			
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	25		Low power	Low power	Low power	Low power	Low power	
U-NII-2A	25		Low power	Low power	Low power	Low power	Low power	
U-NII-2C	25		Low power	Low power	Low power	Low power	Low power	
U-NII-3	25		Low power	Low power	Low power	Low power	Low power	
§ 15.247 (5.8 GHz)								

- The maximum output power specified for production units is the same for all channels, modulations and data rates in each channel bandwidth configuration of the 802.11a/g/n/ac modes.
- The blue highlighted cells represent highest output configurations in each standalone or aggregated frequency band, with tune-up tolerance included.

Table 14.4-3: Maximum output power measured of WLAN antenna, for the applicable OFDM configurations according to the default power measurement procedures for selection initial test configurations – Head&Body

802.11 mode	a	n		ac		
BW(MHz)	20	20	40	20	40	80
U-NII-1	36/40/44/48 23/25/23/22	36/40/44/48 Lower power	38/46 Lower power	36/40/44/48 Lower power	38/46 Lower power	42 Lower power
U-NII-2A	52/56/60/64 25/22/21/22	52/56/60/64 Lower power	54/62 Lower power	52/56/60/64 Lower power	54/62 Lower power	58 Lower power
U-NII-2C	100/104/108/112/116/120/124/128/132/136/140/144 23/24/23/21/24/23/21/22/22/21/24/25	100/104/108/112/116/132/136/140 Lower power	102/110/118/126/134/142 Lower power	100/104/108/112/116/132/136/140 Lower power	102/110/134 Lower power	106/122/138 Lower power
U-NII-3	149/153/157/161/165 23/25/24/23/22	149/153/157/161/165 Lower power	151/159 Lower power	149/153/157/161/165 Lower power	151/159 Lower power	155 Lower power

- The **bold numbers** is the maximum output measured power (mW).
- Channels with measured maximum power within 0.25dB are considered to have the same measured output.
- Channels selected for initial test configuration are highlighted in yellow.

Table 14.4-4: Reported SAR of initial test configuration for Head

802.11 mode	a	n		ac		
BW(MHz)	20	20	40	20	40	80
U-NII-2A	52/56/60/64 **0.29**	52/56/60/64	54/62	52/56/60/64	54/62	58
U-NII-2C	100/104/108/112 116/120/124/128 132/136/140/144 **0.19**	100/104/108/112 116/132/136/140	102/110/ 118/126/ 134/142	100/104/108/112 116/132/136/140	102/110 /134	106/122/138
U-NII-3	149/153/157/161 /165 **0.19**	149/153/157/161/ 165	151/159	149/153/157/161 /165	151/159	155
Highest measured output power channel tested initially are in yellow highlight.						

Table 14.4-5: Reported SAR of initial test configuration for Body – 10mm

802.11 mode	a	n		ac		
BW(MHz)	**20**	**20**	**40**	**20**	**40**	**80**
U-NII-2A	52/56/60/64 **0.1**	52/56/60/64	54/62	52/56/60/64	54/62	58
U-NII-2C	100/104/108/112 116/120/124/128 132/136/140/144 **0.14**	100/104/108/112 116/132/136/140	102/110/118/126/134/142	100/104/108/112 116/132/136/140	102/110/134	106/122/138
U-NII-3	149/153/157/161/165 **0.1**	149/153/157/161/165	151/159	149/153/157/161/165	151/159	155
Highest measured output power channel tested initially are in yellow highlight.						

Table 14.4-6: SAR Values (WLAN 5G - Head)

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
52	5260	Left	Touch	Fig.31	13.98	14	0.071	**0.07**	0.285	**0.29**	0.06
52	5260	Left	Tilt	/	13.98	14	0.048	**0.05**	0.187	**0.19**	-0.03
52	5260	Right	Touch	/	13.98	14	0.029	**0.03**	0.112	**0.11**	0.1
52	5260	Right	Tilt	/	13.98	14	0.026	**0.03**	0.105	**0.11**	0.02
144	5720	Left	Touch	/	13.98	14	0.044	**0.04**	0.192	**0.19**	-0.03
144	5720	Left	Tilt	/	13.98	14	0.032	**0.03**	0.126	**0.13**	0.17
144	5720	Right	Touch	/	13.98	14	0.017	**0.02**	0.067	**0.07**	0.01
144	5720	Right	Tilt	/	13.98	14	0.016	**0.02**	0.062	**0.06**	0.07
153	5765	Left	Touch	/	13.9	14	0.048	**0.05**	0.187	**0.19**	-0.09
153	5765	Left	Tilt	/	13.9	14	0.023	**0.02**	0.108	**0.11**	0.1
153	5765	Right	Touch	/	13.9	14	0.014	**0.01**	0.112	**0.11**	-0.04
153	5765	Right	Tilt	/	13.9	14	0.011	**0.01**	0.044	**0.05**	0.03

Table 14.4-7: SAR Values (WLAN 5G - Body)

Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
52	5260	Front	/	13.98	14	0.022	**0.02**	0.063	**0.06**	-0.14
52	5260	Rear	/	13.98	14	0.034	**0.03**	0.099	**0.10**	0.07
52	5260	Left	/	13.98	14	0.007	**0.01**	0.026	**0.03**	-0.08
52	5260	Top	/	13.98	14	0.017	**0.02**	0.044	**0.04**	-0.06
144	5720	Front	/	13.98	14	0.014	**0.01**	0.072	**0.07**	0.14
144	5720	Rear	Fig.32	13.98	14	0.045	**0.05**	0.139	**0.14**	-0.09
144	5720	Left	/	13.98	14	0.012	**0.01**	0.061	**0.06**	-0.03
144	5720	Top	/	13.98	14	0.013	**0.01**	0.057	**0.06**	0.12
153	5765	Front	/	13.9	14	0.013	**0.01**	0.099	**0.10**	0.08
153	5765	Rear	/	13.9	14	0.031	**0.03**	0.088	**0.09**	-0.03
153	5765	Left	/	13.9	14	0.006	**0.01**	0.025	**0.03**	-0.08
153	5765	Top	/	13.9	14	0.016	**0.02**	0.040	**0.04**	0.14

Note: The distance between the EUT and the phantom bottom is 10mm.

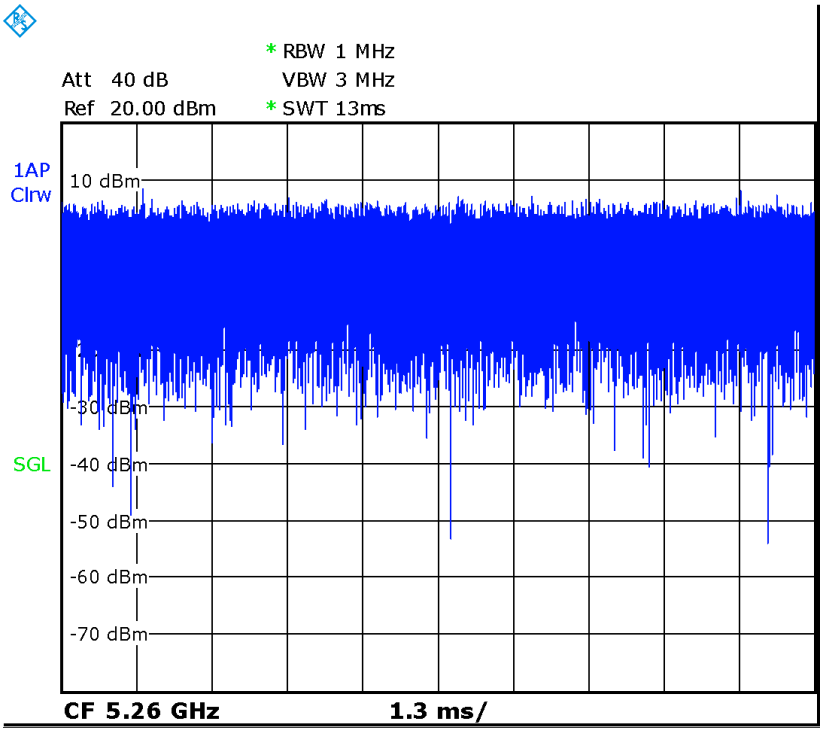
According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit. The scaled reported SAR is presented as below.

Table 14.4-8: SAR Values (WLAN 5G - Head) (Scaled Reported SAR)

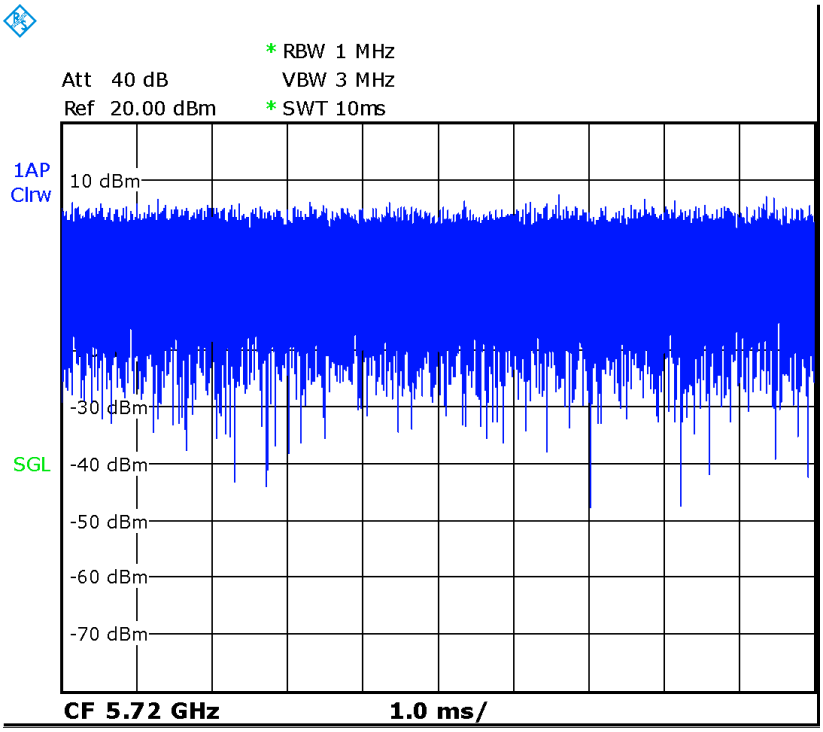
Frequency		Side	Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
Ch.	MHz						
52	5260	Left	Touch	100%	100%	**0.29**	**0.29**

Table 14.4-9 SAR Values (WLAN 5G - Body) (Scaled Reported SAR)

Frequency		Test Position	Distance (mm)	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
Ch.	MHz						
144	5720	Rear	10	100%	100%	**0.14**	**0.14**



Picture 14.2 The plot of duty factor for Head



Picture 14.3 The plot of duty factor for Body

15 SAR Measurement Variability

SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium.

The following procedures are applied to determine if repeated measurements are required.

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps2) through 4) do not apply.

2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.

3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45W/kg (~ 10% from the 1-g SAR limit).

4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

Table 15.1: SAR Measurement Variability for Body WCDMA1700 (1g)

Frequency		Mode	Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz							
1412	1732.5	RMC	Bottom	10	0.97	0.963	1.01	/

Table 15.2: SAR Measurement Variability for Body WCDMA1900 (1g)

Frequency		Mode	Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz							
9262	1852.4	RMC	Bottom	10	1.03	0.988	1.04	/

Table 15.3: SAR Measurement Variability for Body LTE Band66 (1g)

Frequency		Mode	Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz							
132072	1720	1RB_Mid	Rear	15	0.834	0.821	1.02	/
132322	1745	50RB_High	Bottom	10	1.02	0.98	1.04	/

16 Measurement Uncertainty

16.1 Measurement Uncertainty for Normal SAR Tests (300MHz~3GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.0	N	1	1	1	6.0	6.0	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	N	1	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. restrictions	B	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	∞
12	Probe positioning with respect to phantom shell	B	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Test sample related										
14	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
15	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
16	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
17	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
18	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
19	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
20	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
21	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521

Combined standard uncertainty	$u_c' = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$					9.55	9.43	257
Expanded uncertainty (confidence interval of 95 %)	$u_e = 2u_c$					19.1	18.9	

16.2 Measurement Uncertainty for Normal SAR Tests (3~6GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.55	N	1	1	1	6.55	6.55	∞
2	Isotropy	B	4.7	R	√3	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	2.0	R	√3	1	1	1.2	1.2	∞
4	Linearity	B	4.7	R	√3	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	√3	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	√3	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	√3	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	√3	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	√3	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	√3	1	1	0	0	∞
11	Probe positioned mech. restrictions	B	0.8	R	√3	1	1	0.5	0.5	∞
12	Probe positioning with respect to phantom shell	B	6.7	R	√3	1	1	3.9	3.9	∞
13	Post-processing	B	4.0	R	√3	1	1	2.3	2.3	∞
Test sample related										
14	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
15	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
16	Drift of output power	B	5.0	R	√3	1	1	2.9	2.9	∞
Phantom and set-up										
17	Phantom uncertainty	B	4.0	R	√3	1	1	2.3	2.3	∞
18	Liquid conductivity (target)	B	5.0	R	√3	0.64	0.43	1.8	1.2	∞
19	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
20	Liquid permittivity (target)	B	5.0	R	√3	0.6	0.49	1.7	1.4	∞

21	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c^{'} = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$						10.7	10.6	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						21.4	21.1	

16.3 Measurement Uncertainty for Fast SAR Tests (300MHz~3GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.0	N	1	1	1	6.0	6.0	∞
2	Isotropy	B	4.7	R	√3	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	1.0	R	√3	1	1	0.6	0.6	∞
4	Linearity	B	4.7	R	√3	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	√3	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	√3	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	√3	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	√3	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	√3	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	√3	1	1	0	0	∞
11	Probe positioned mech. Restrictions	B	0.4	R	√3	1	1	0.2	0.2	∞
12	Probe positioning with respect to phantom shell	B	2.9	R	√3	1	1	1.7	1.7	∞
13	Post-processing	B	1.0	R	√3	1	1	0.6	0.6	∞
14	Fast SAR z-Approximation	B	7.0	R	√3	1	1	4.0	4.0	∞
Test sample related										
15	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
16	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
17	Drift of output power	B	5.0	R	√3	1	1	2.9	2.9	∞
Phantom and set-up										
18	Phantom uncertainty	B	4.0	R	√3	1	1	2.3	2.3	∞
19	Liquid conductivity (target)	B	5.0	R	√3	0.64	0.43	1.8	1.2	∞

20	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
21	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
22	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c' = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						10.4	10.3	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						20.8	20.6	

16.4 Measurement Uncertainty for Fast SAR Tests (3~6GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.55	N	1	1	1	6.55	6.55	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. Restrictions	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
12	Probe positioning with respect to phantom shell	B	6.7	R	$\sqrt{3}$	1	1	3.9	3.9	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
14	Fast SAR z-Approximation	B	14.0	R	$\sqrt{3}$	1	1	8.1	8.1	∞
Test sample related										
15	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
16	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
17	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞

Phantom and set-up										
18	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
19	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
20	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
21	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
22	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c^{'} = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						13.5	13.4	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						27.0	26.8	

17 MAIN TEST INSTRUMENTS

Table 17.1: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	N5239A	MY46110673	January 24, 2020	One year
02	Power meter	NRP2	106277	September 4, 2019	One year
03	Power sensor	NRP8S	104291		
04	Signal Generator	E4438C	MY49070393	January 4, 2020	One Year
05	Amplifier	60S1G4	0331848	No Calibration Requested	
06	BTS	E5515C	MY50263375	January 17, 2020	One year
07	BTS	CMW500	159890	January 3, 2020	One year
08	E-field Probe	SPEAG EX3DV4	3617	January 30, 2020	One year
09	DAE	SPEAG DAE4	777	January 8, 2020	One year
10	Dipole Validation Kit	SPEAG D750V3	1017	July 18,2019	One year
11	Dipole Validation Kit	SPEAG D835V2	4d069	July 18,2019	One year
12	Dipole Validation Kit	SPEAG D1750V2	1003	July 16,2019	One year
13	Dipole Validation Kit	SPEAG D1900V2	5d101	July 17,2019	One year
14	Dipole Validation Kit	SPEAG D2450V2	853	July 17,2019	One year
15	Dipole Validation Kit	SPEAG D5GHzV2	1060	July 22, 2019	One year

END OF REPORT BODY

ANNEX A Graph Results

GSM850_CH190 Left Cheek
Date: 2020-6-15
Electronics: DAE4 Sn777
Medium: head 835 MHz
Medium parameters used: f = 836.6 MHz; σ = 0.886 mho/m; εr = 41.45; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: GSM850 836.6 MHz Duty Cycle: 1:8.3
Probe: EX3DV4 – SN3617 ConvF(9.66,9.66,9.66)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.259 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.828 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.295 W/kg
SAR(1 g) = 0.213 W/kg; SAR(10 g) = 0.16 W/kg
Maximum value of SAR (measured) = 0.262 W/kg

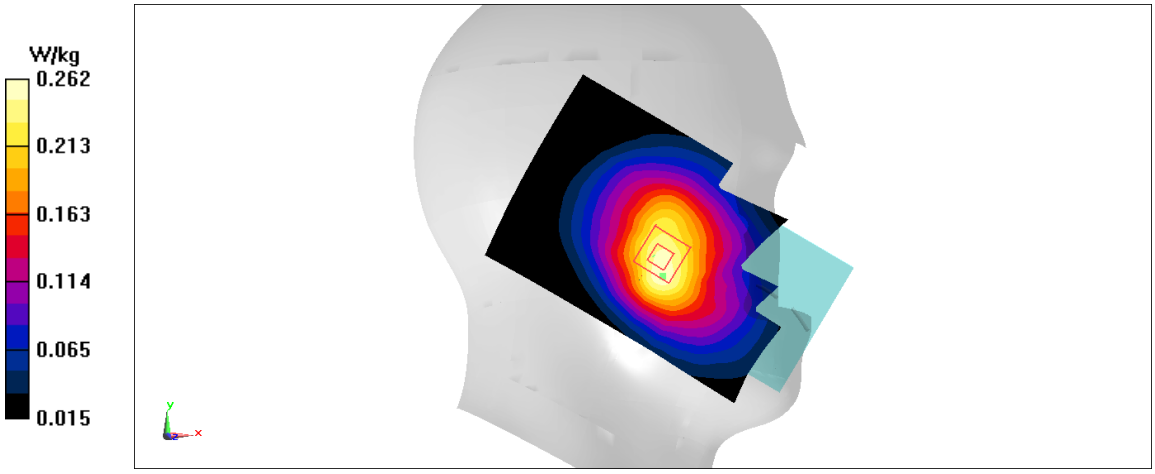


Fig A.1

GSM850_CH251 Rear 10mm
Date: 2020-6-15
Electronics: DAE4 Sn777
Medium: head 835 MHz
Medium parameters used: f = 848.8 MHz; σ = 0.9 mho/m; εr = 41.26; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: GSM850 848.8 MHz Duty Cycle: 1:4
Probe: EX3DV4 – SN3617 ConvF(9.66,9.66,9.66)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.469 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.85 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.531 W/kg
SAR(1 g) = 0.381 W/kg; SAR(10 g) = 0.287 W/kg
Maximum value of SAR (measured) = 0.473 W/kg

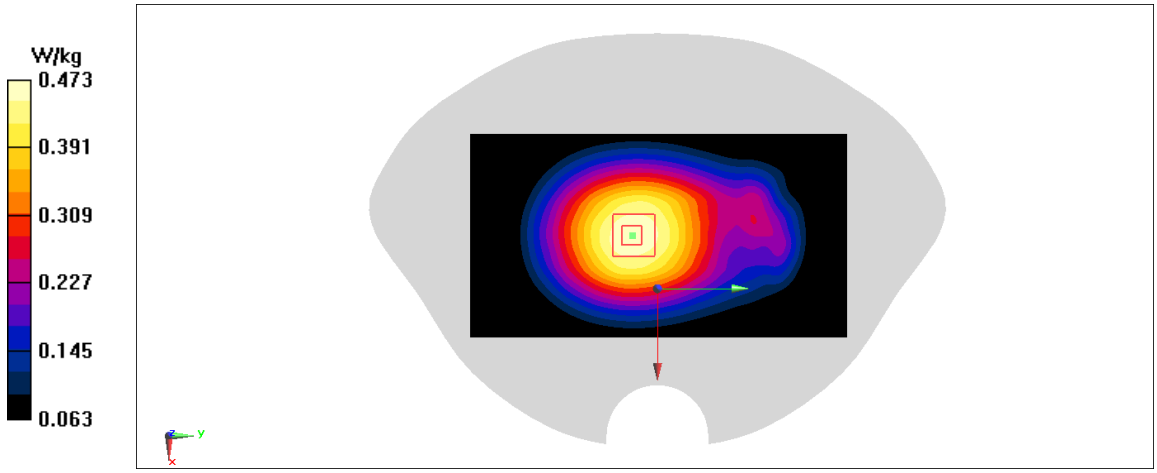


Fig A.2

PCS1900_CH512 Right Cheek
Date: 2020-6-17
Electronics: DAE4 Sn777
Medium: head 1900 MHz
Medium parameters used: f = 1850.2 MHz; σ = 1.334 mho/m; εr = 39.39; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: PCS1900 1850.2 MHz Duty Cycle: 1:8.3
Probe: EX3DV4 – SN3617 ConvF(8.14,8.14,8.14)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.183 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.277 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.197 W/kg
SAR(1 g) = 0.132 W/kg; SAR(10 g) = 0.085 W/kg
Maximum value of SAR (measured) = 0.174 W/kg

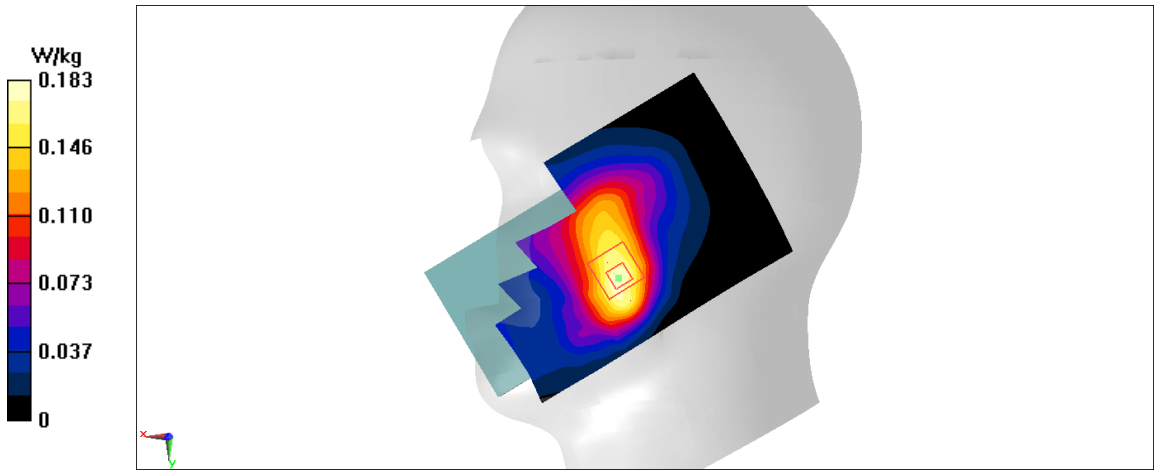


Fig A.3

PCS1900_CH512 Rear GPRS 15mm
Date: 2020-6-17
Electronics: DAE4 Sn777
Medium: head 1900 MHz
Medium parameters used: f = 1850.2 MHz; σ = 1.334 mho/m; εr = 39.39; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: PCS1900 1850.2 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(8.14,8.14,8.14)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.259 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.828 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.295 W/kg
SAR(1 g) = 0.266 W/kg; SAR(10 g) = 0.15 W/kg
Maximum value of SAR (measured) = 0.262 W/kg

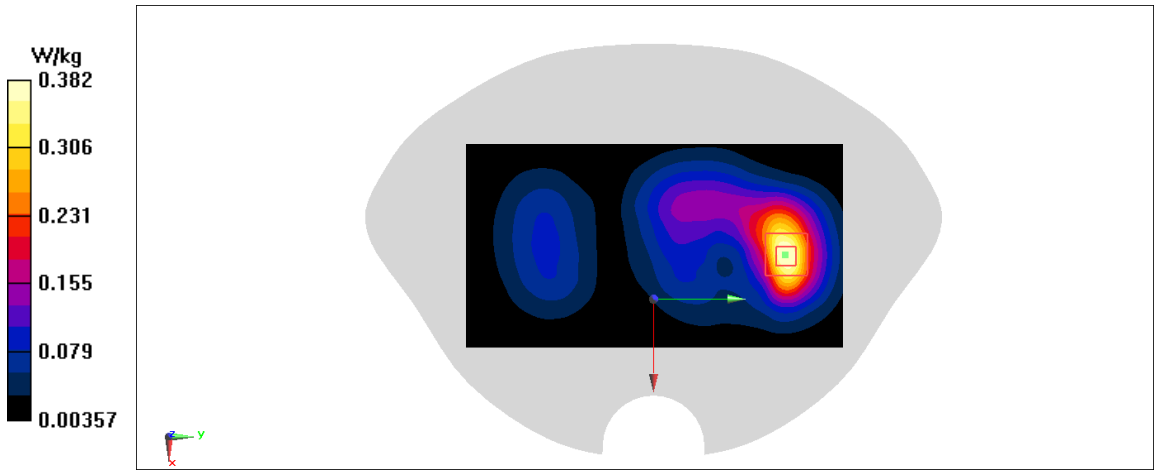


Fig A.4

PCS1900_CH661 Bottom 10mm
Date: 2020-6-17
Electronics: DAE4 Sn777
Medium: head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.484 mho/m; εr = 39.27; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: PCS1900 1880 MHz Duty Cycle: 1:4
Probe: EX3DV4 – SN3617 ConvF(8.14,8.14,8.14)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.999 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.78V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) =1.23W/kg
SAR(1 g) = 0.646 W/kg; SAR(10 g) = 0.326 W/kg
Maximum value of SAR (measured) = 0.973W/kg

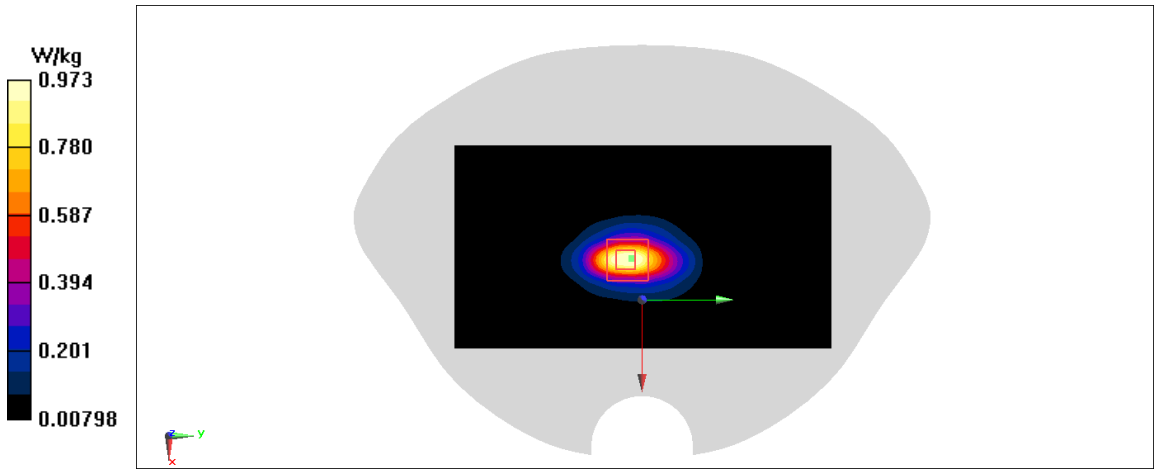


Fig A.5

WCDMA1900-BII_CH9538 Left Cheek
Date: 2020-6-17
Electronics: DAE4 Sn777
Medium: head 1900 MHz
Medium parameters used: f = 1907.6 MHz; σ = 1.39 mho/m; εr = 39.32; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: WCDMA1900-BII 1907.6 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(8.14,8.14,8.14)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.444 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.965 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.501 W/kg
SAR(1 g) = 0.326 W/kg; SAR(10 g) = 0.211 W/kg
Maximum value of SAR (measured) = 0.438 W/kg

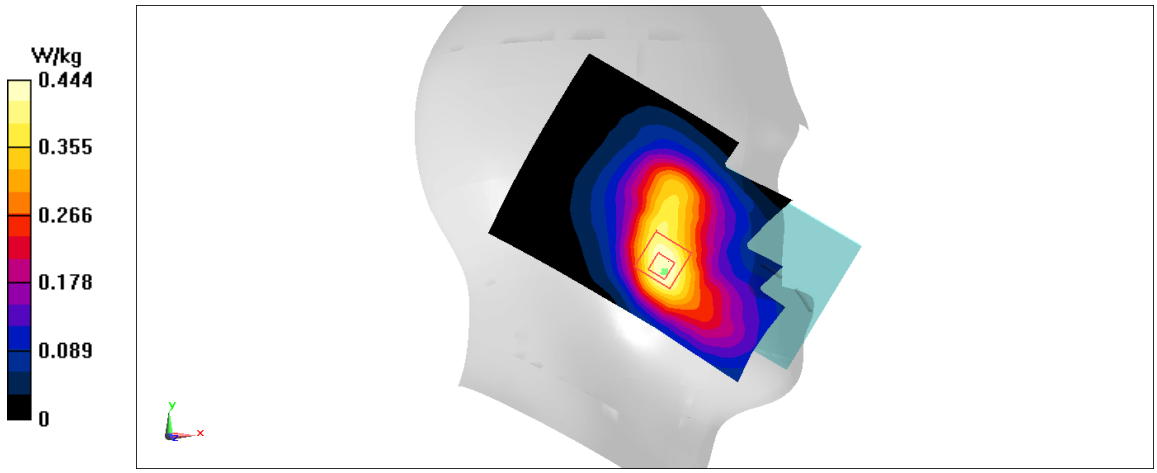


Fig A.6

WCDMA1900-BII_CH9400 Rear 15mm
Date: 2020-6-17
Electronics: DAE4 Sn777
Medium: head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.484 mho/m; εr = 39.27; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: WCDMA1900-BII 1880 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(8.14,8.14,8.14)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.443 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.026 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.527 W/kg
SAR(1 g) = 0.31 W/kg; SAR(10 g) = 0.18 W/kg
Maximum value of SAR (measured) = 0.444 W/kg

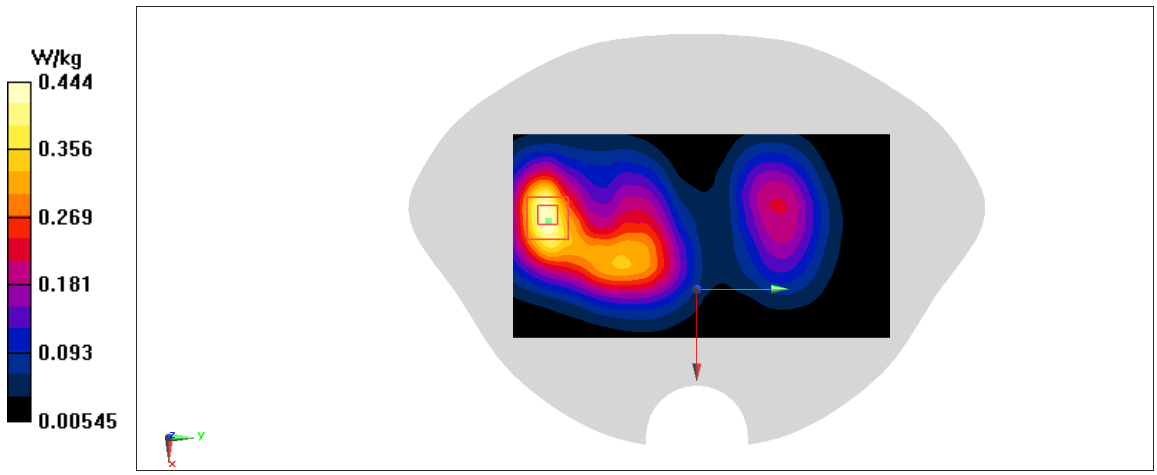


Fig A.7

WCDMA1900-BII_CH9262 Bottom 10mm
Date: 2020-6-17
Electronics: DAE4 Sn777
Medium: head 1900 MHz
Medium parameters used: f = 1852.4 MHz; σ = 1.337 mho/m; εr = 39.59; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: WCDMA1900-BII 1852.4 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(8.14,8.14,8.14)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.44 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.96 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.71 W/kg
SAR(1 g) = 1.03 W/kg; SAR(10 g) = 0.526 W/kg
Maximum value of SAR (measured) = 1.40 W/kg

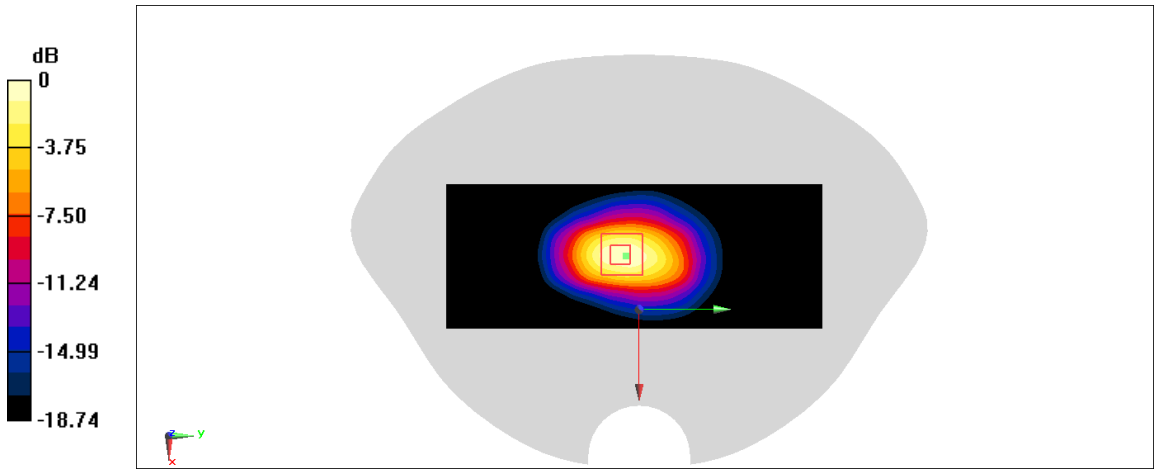


Fig A.8

WCDMA1700-BIV_CH1412 Left Cheek
Date: 2020-6-16
Electronics: DAE4 Sn777
Medium: head 1750 MHz
Medium parameters used: f = 1732.4 MHz; σ = 1.357 mho/m; εr = 39.46; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: WCDMA1700-BIV 1732.4 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(8.41,8.41,8.41)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.223 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.461 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.245 W/kg
SAR(1 g) = 0.166 W/kg; SAR(10 g) = 0.109 W/kg
Maximum value of SAR (measured) = 0.210 W/kg

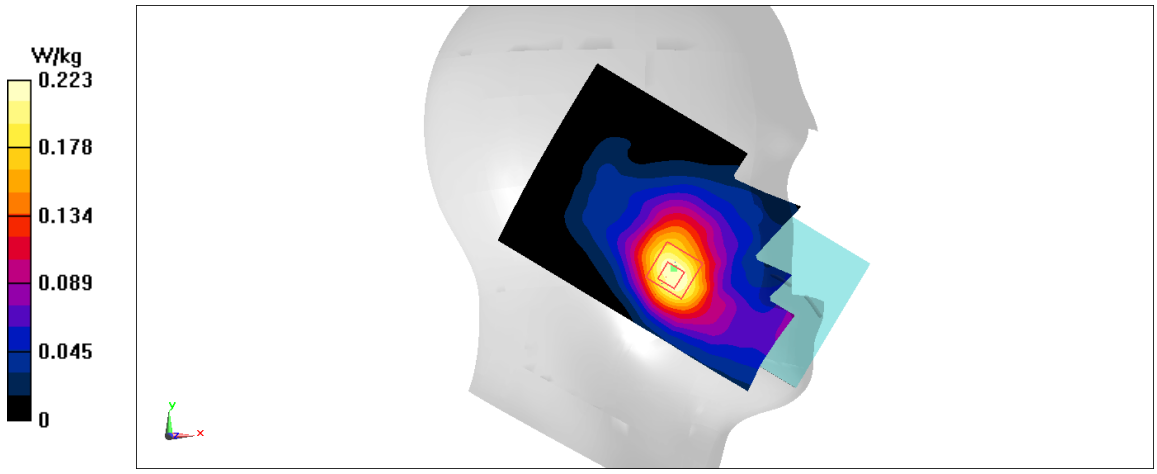


Fig A.9

WCDMA1700-BIV_CH1312 Rear 15mm
Date: 2020-6-16
Electronics: DAE4 Sn777
Medium: head 1750 MHz
Medium parameters used: f = 1712.4 MHz; σ = 1.344 mho/m; εr = 39.5; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: WCDMA1700-BIV 1712.4 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(8.41,8.41,8.41)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.711 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.392 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.841 W/kg
SAR(1 g) = 0.508 W/kg; SAR(10 g) = 0.302 W/kg
Maximum value of SAR (measured) = 0.721 W/kg

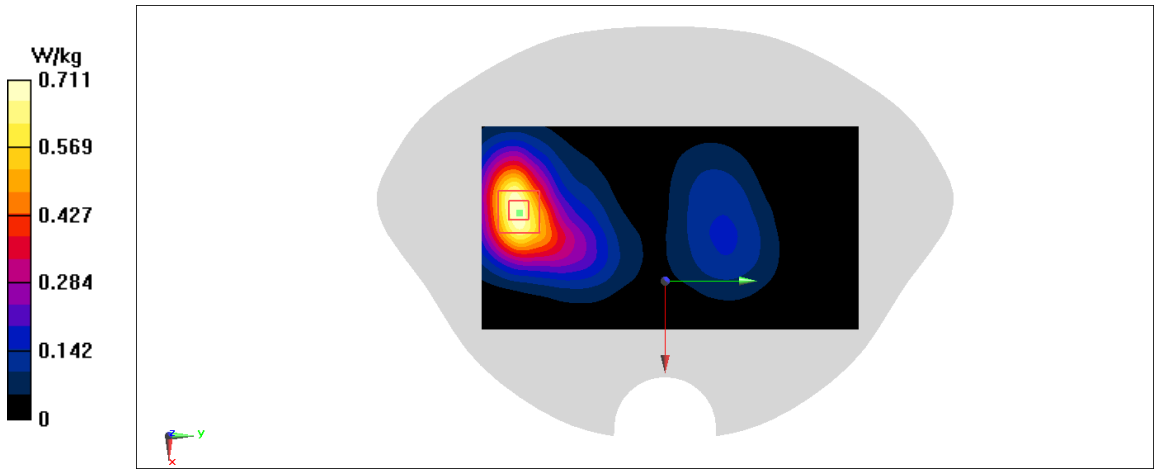


Fig A.10

WCDMA1700-BIV_CH1412 Bottom 10mm
Date: 2020-6-16
Electronics: DAE4 Sn777
Medium: head 1750 MHz
Medium parameters used: f = 1732.4 MHz; σ = 1.357 mho/m; εr = 39.46; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: WCDMA1700-BIV 1732.5 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(8.41,8.41,8.41)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.61 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.9450 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.78 W/kg
SAR(1 g) = 0.97 W/kg; SAR(10 g) = 0.508 W/kg
Maximum value of SAR (measured) = 1.47 W/kg

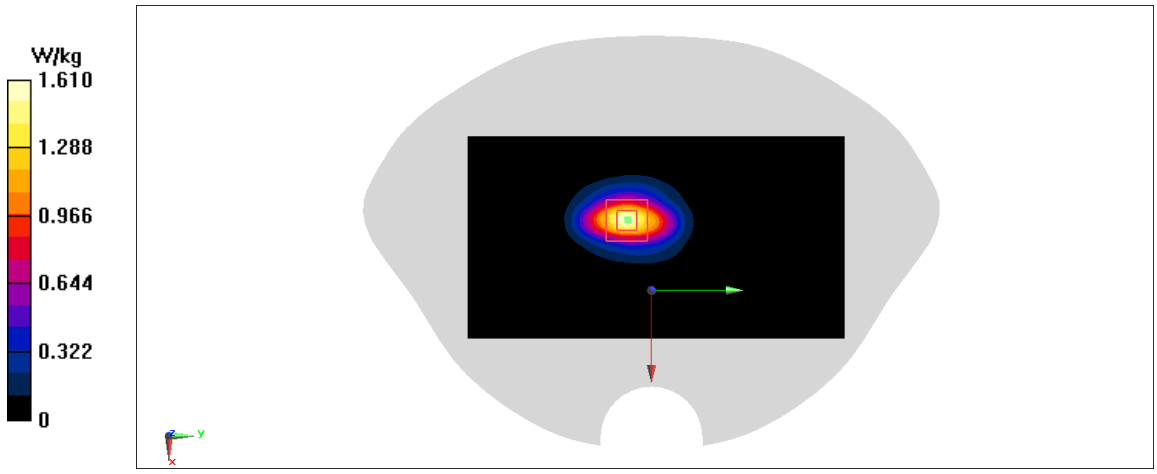


Fig A.11

WCDMA850-BV_CH4183 Right Cheek
Date: 2020-6-15
Electronics: DAE4 Sn777
Medium: head 835 MHz
Medium parameters used: f = 836.6 MHz; σ = 0.886 mho/m; εr = 41.45; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: WCDMA850-BV 836.6 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(9.66,9.66,9.66)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.418 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.057 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.469 W/kg
SAR(1 g) = 0.338 W/kg; SAR(10 g) = 0.256 W/kg
Maximum value of SAR (measured) = 0.414 W/kg

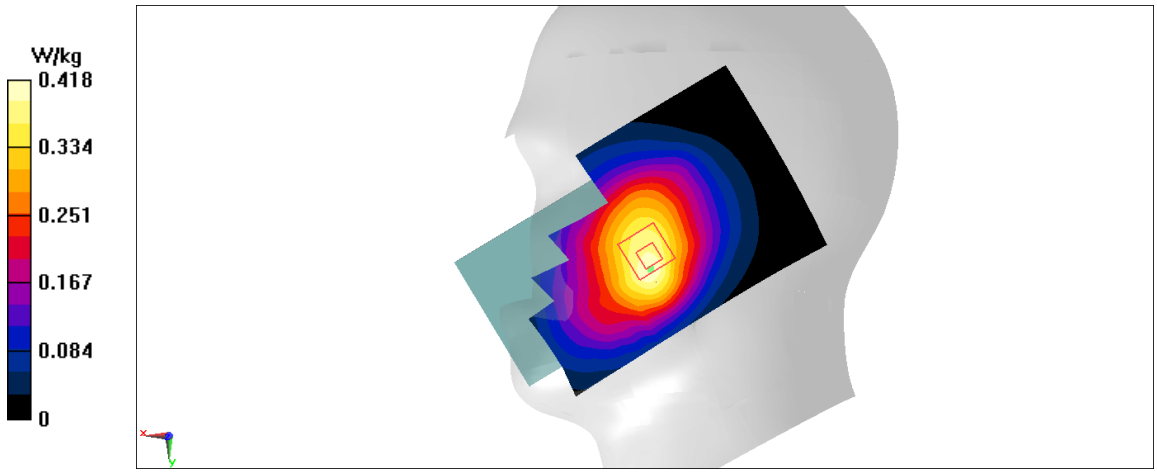


Fig A.12

WCDMA850-BV_CH4183 Rear 10mm
Date: 2020-6-15
Electronics: DAE4 Sn777
Medium: head 835 MHz
Medium parameters used: f = 836.6 MHz; σ = 0.886 mho/m; εr = 41.45; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: WCDMA850-BV 836.6 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(9.66,9.66,9.66)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.537 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.44 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.611 W/kg
SAR(1 g) = 0.438 W/kg; SAR(10 g) = 0.328 W/kg
Maximum value of SAR (measured) = 0.543 W/kg

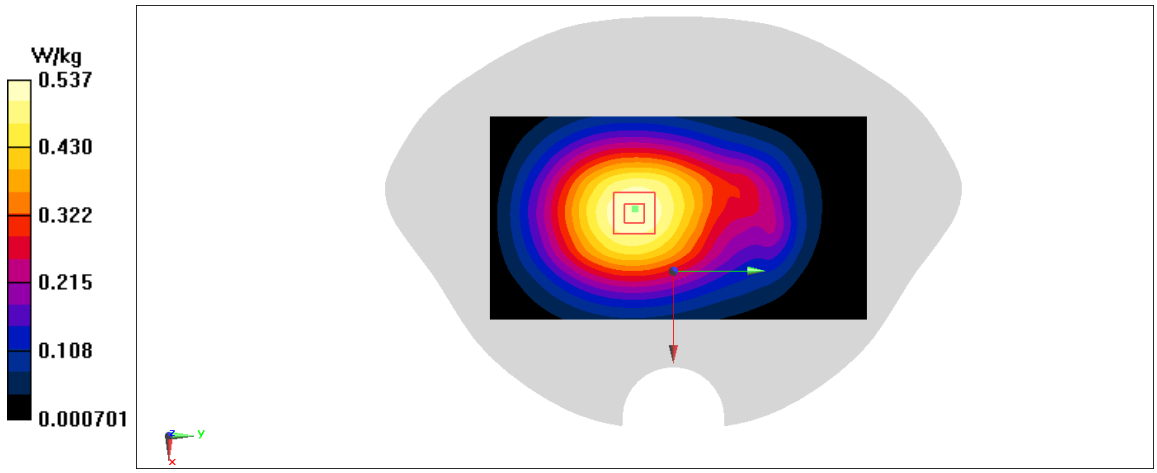


Fig A.13

LTE1900-FDD2_CH19100 Left Cheek
Date: 2020-6-17
Electronics: DAE4 Sn777
Medium: head 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.382 mho/m; εr = 39.33; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE1900-FDD2 1900 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(8.14,8.14,8.14)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.371 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.526 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 0.398 W/kg
SAR(1 g) = 0.266 W/kg; SAR(10 g) = 0.172 W/kg
Maximum value of SAR (measured) = 0.346 W/kg

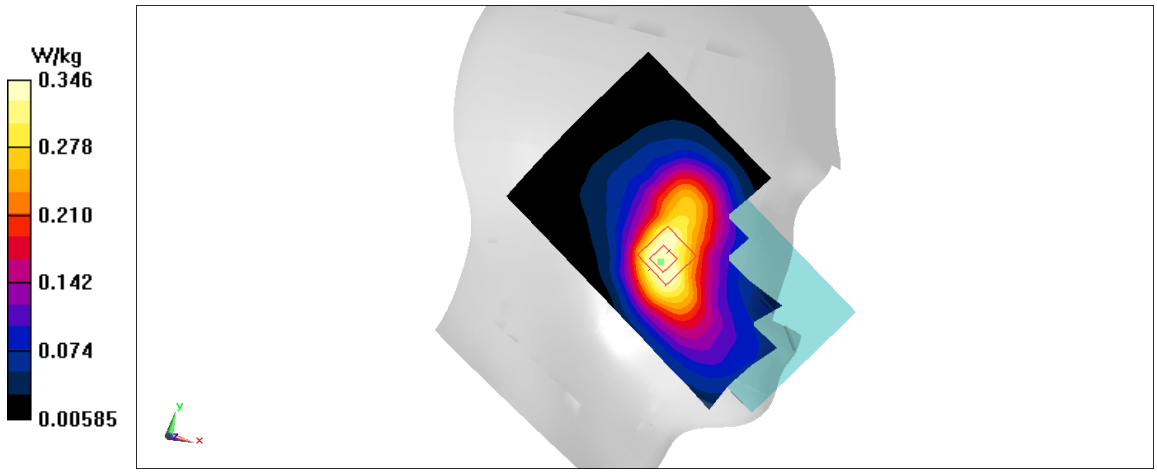


Fig A.14

LTE1900-FDD2_CH18700 50RB-High Rear 15mm
Date: 2020-6-17
Electronics: DAE4 Sn777
Medium: head 1900 MHz
Medium parameters used: f = 1860 MHz; σ = 1.338 mho/m; εr = 39.51; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE1900-FDD2 1860 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(8.14,8.14,8.14)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.503 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.218 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.593 W/kg
SAR(1 g) = 0.347 W/kg; SAR(10 g) = 0.198 W/kg
Maximum value of SAR (measured) = 0.493 W/kg

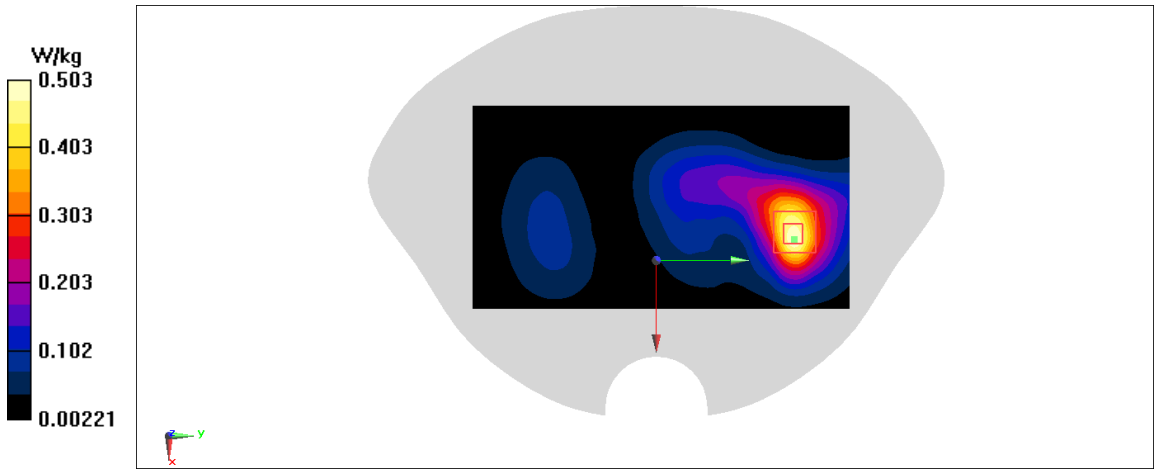


Fig A.15

LTE1900-FDD2_CH19100 Bottom 10mm
Date: 2020-6-17
Electronics: DAE4 Sn777
Medium: head 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.382 mho/m; εr = 39.33; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE1900-FDD2 1900 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(8.14,8.14,8.14)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.04 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.00 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 1.18 W/kg
SAR(1 g) = 0.637 W/kg; SAR(10 g) = 0.328 W/kg
Maximum value of SAR (measured) = 0.964 W/kg

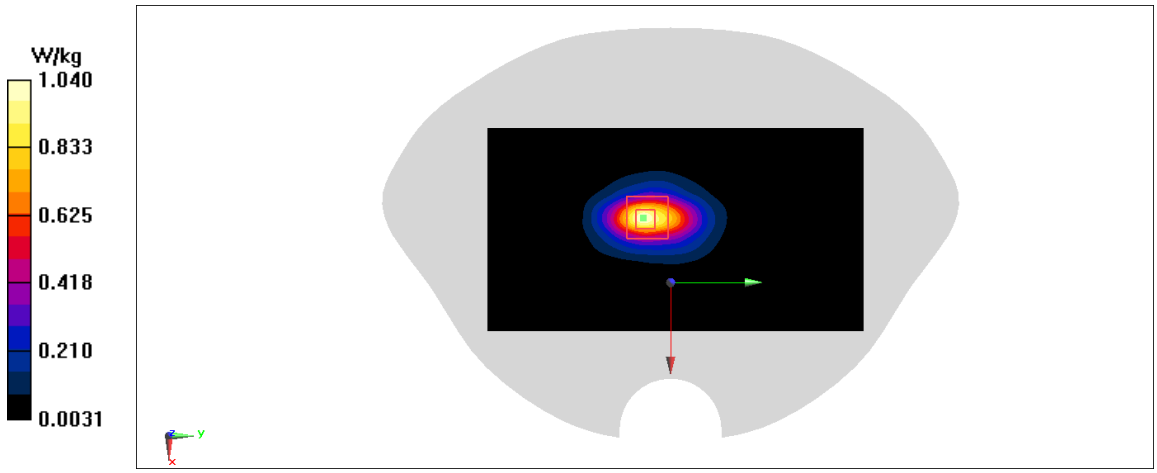


Fig A.16

LTE850-FDD5_CH20600 Left Cheek
Date: 2020-6-15
Electronics: DAE4 Sn777
Medium: head 835 MHz
Medium parameters used: f = 844 MHz; σ = 0.893 mho/m; εr = 41.44; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE850-FDD5 844 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(9.66,9.66,9.66)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.312 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.554 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.355 W/kg
SAR(1 g) = 0.265 W/kg; SAR(10 g) = 0.201 W/kg
Maximum value of SAR (measured) = 0.321 W/kg

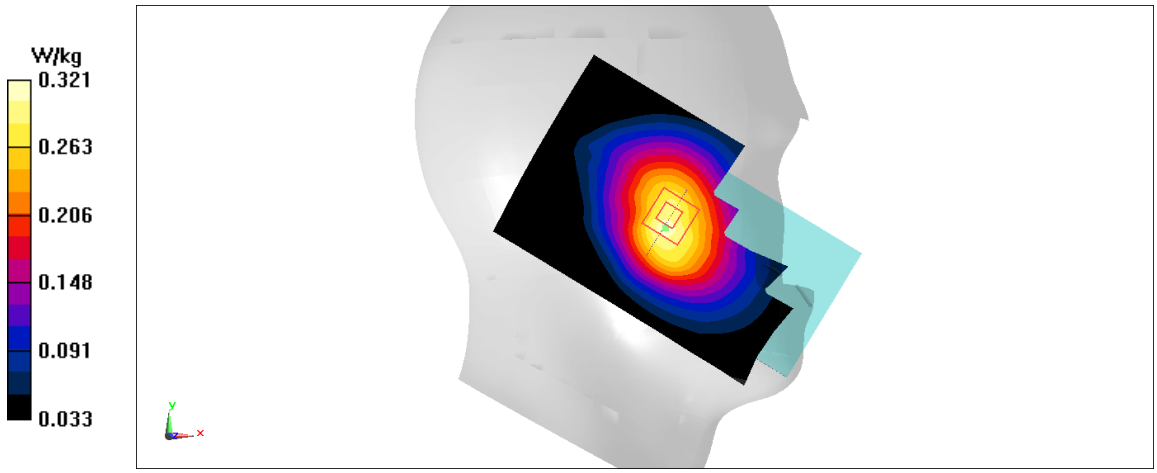


Fig A.17

LTE850-FDD5_CH20600 Rear 10mm
Date: 2020-6-15
Electronics: DAE4 Sn777
Medium: head 835 MHz
Medium parameters used: f = 844 MHz; σ = 0.893 mho/m; εr = 41.44; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE850-FDD5 844 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(9.66,9.66,9.66)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.448 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.52 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.514 W/kg
SAR(1 g) = 0.364 W/kg; SAR(10 g) = 0.274 W/kg
Maximum value of SAR (measured) = 0.456 W/kg

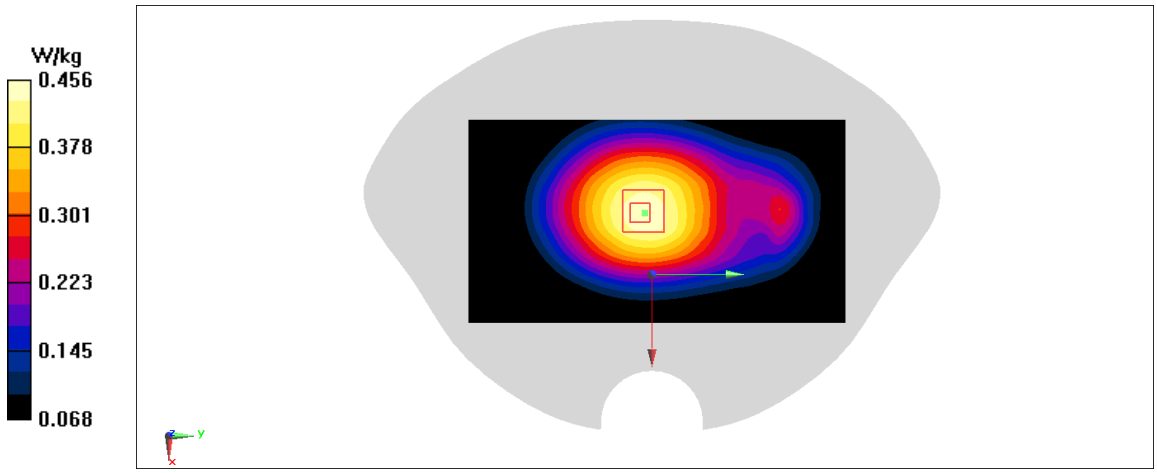


Fig A.18

LTE2500-FDD7_CH20850 Right Cheek
Date: 2020-6-19
Electronics: DAE4 Sn777
Medium: head 2600 MHz
Medium parameters used: f = 2510 MHz; σ = 1.874 mho/m; εr = 38.51; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE2500-FDD7 2510 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(7.52,7.52,7.52)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.357 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.939 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.406 W/kg
SAR(1 g) = 0.213 W/kg; SAR(10 g) = 0.112 W/kg
Maximum value of SAR (measured) = 0.330 W/kg

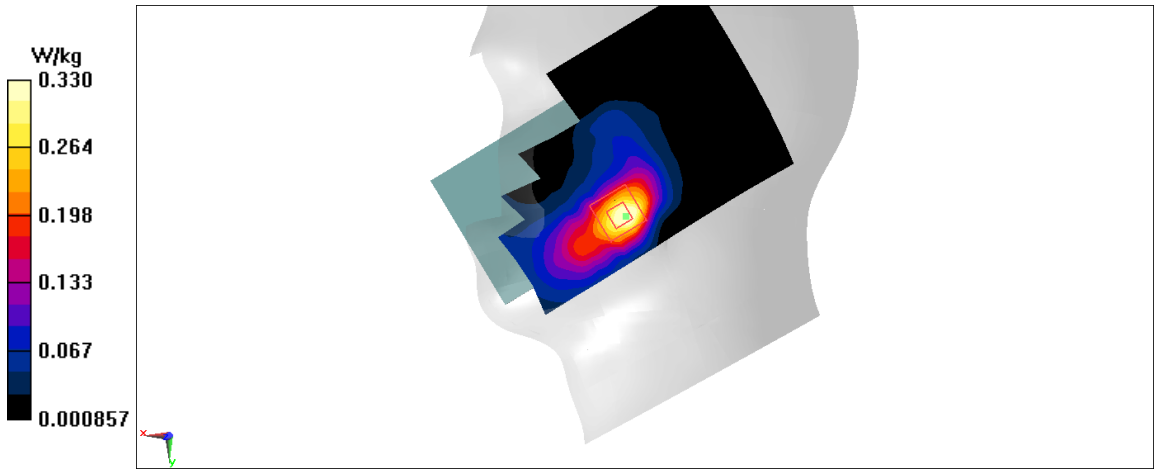


Fig A.19

LTE2500-FDD7_CH20850 1RB-Middle Rear 15mm
Date: 2020-6-19
Electronics: DAE4 Sn777
Medium: head 2600 MHz
Medium parameters used: f = 2510 MHz; σ = 1.874 mho/m; εr = 38.51; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE2500-FDD7 2510 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(7.52,7.52,7.52)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.543 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.928 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.692 W/kg
SAR(1 g) = 0.354 W/kg; SAR(10 g) = 0.178 W/kg
Maximum value of SAR (measured) = 0.565 W/kg

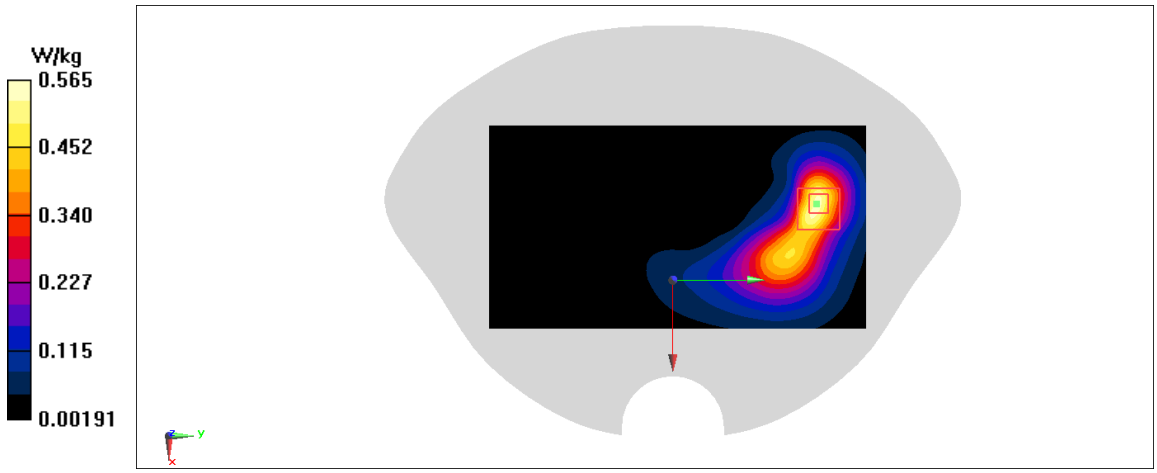


Fig A.20

LTE2500-FDD7_CH21350 Rear 10mm
Date: 2020-6-19
Electronics: DAE4 Sn777
Medium: head 2600 MHz
Medium parameters used: f = 2560 MHz; σ = 1.922 mho/m; εr = 38.34; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE2500-FDD7 2560 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(7.52,7.52,7.52)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.475 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.797 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.719 W/kg
SAR(1 g) = 0.341 W/kg; SAR(10 g) = 0.151 W/kg
Maximum value of SAR (measured) = 0.504 W/kg

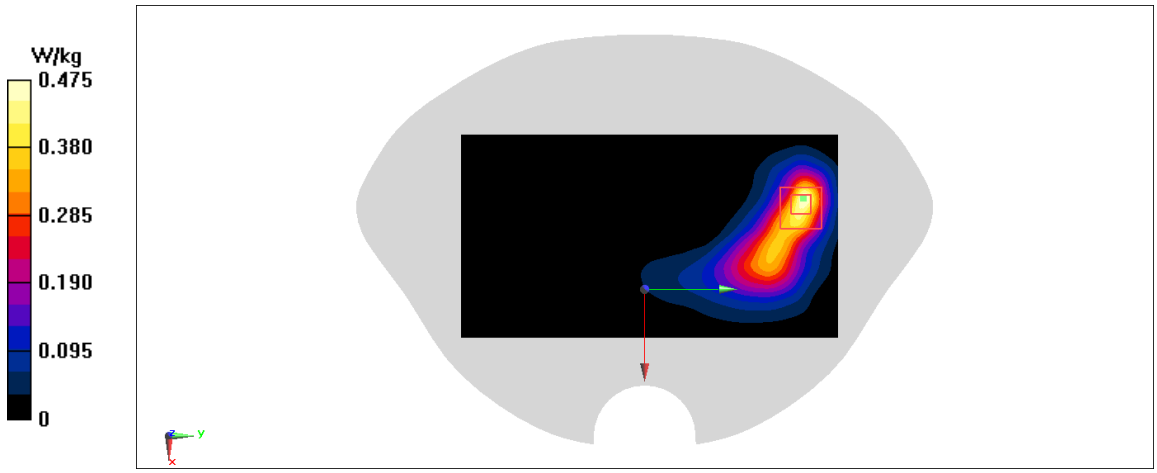


Fig A.21

LTE700-FDD12_CH23130 Left Cheek
Date: 2020-6-14
Electronics: DAE4 Sn777
Medium: head 750 MHz
Medium parameters used: f = 711 MHz; σ = 0.86 mho/m; εr = 42.12; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE700-FDD12 711 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(10.07,10.07,10.07)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.238 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.271 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.265 W/kg
SAR(1 g) = 0.195 W/kg; SAR(10 g) = 0.151 W/kg
Maximum value of SAR (measured) = 0.240 W/kg

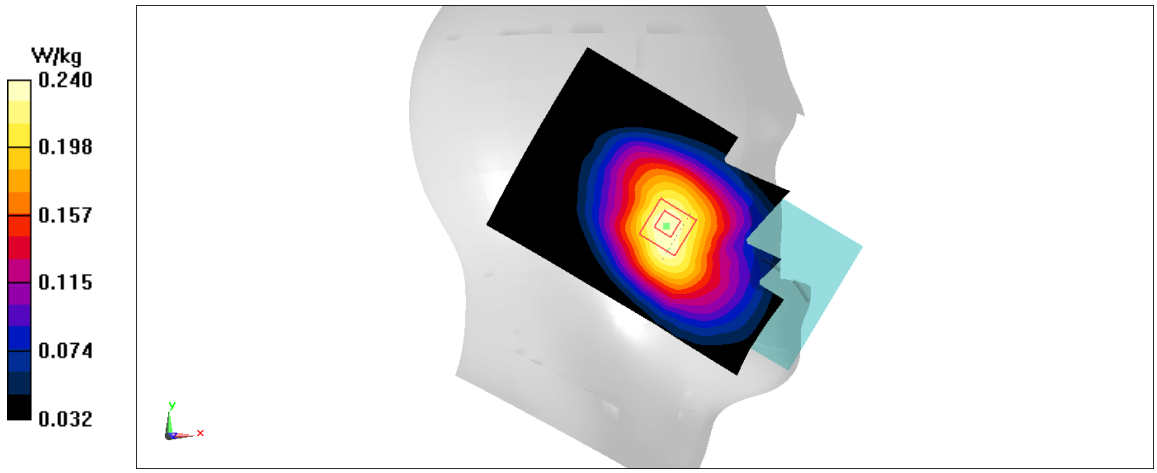


Fig A.22

LTE700-FDD12_CH23130 Rear 10mm
Date: 2020-6-14
Electronics: DAE4 Sn777
Medium: head 750 MHz
Medium parameters used: f = 711 MHz; σ = 0.86 mho/m; εr = 42.12; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE700-FDD12 711 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(10.07,10.07,10.07)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.453 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.32 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.519 W/kg
SAR(1 g) = 0.369 W/kg; SAR(10 g) = 0.274 W/kg
Maximum value of SAR (measured) = 0.460 W/kg

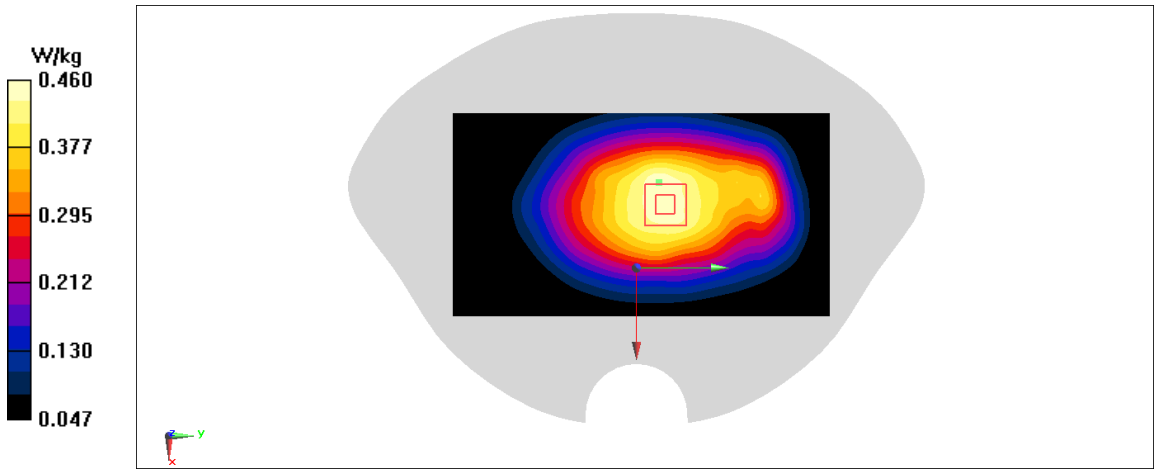


Fig A.23

LTE750-FDD13_CH23230 Right Cheek
Date: 2020-6-14
Electronics: DAE4 Sn777
Medium: head 750 MHz
Medium parameters used: f = 782 MHz; σ = 0.927 mho/m; εr = 42.03; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE750-FDD13 782 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(10.07,10.07,10.07)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.291 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.777 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.323 W/kg
SAR(1 g) = 0.231 W/kg; SAR(10 g) = 0.175 W/kg
Maximum value of SAR (measured) = 0.286 W/kg

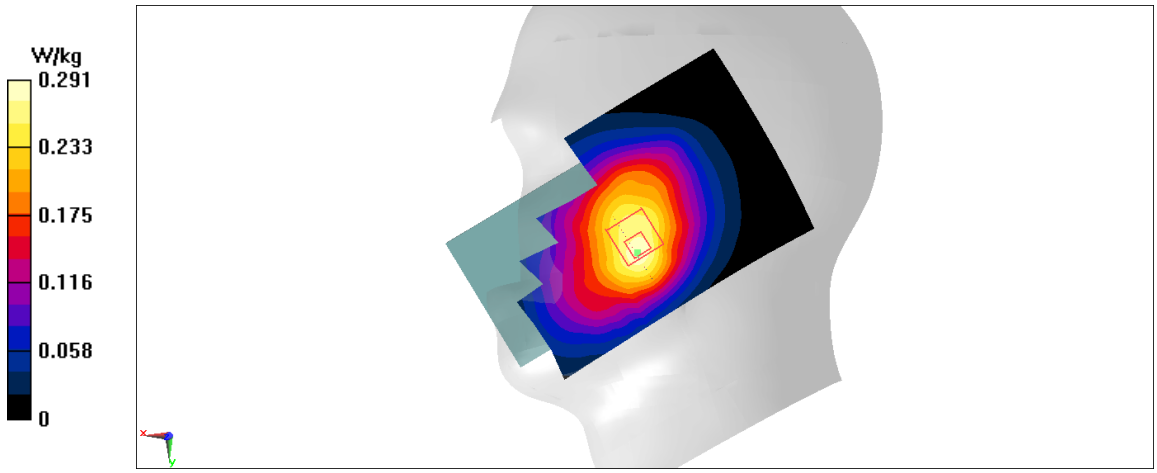


Fig A.24

LTE750-FDD13_CH23230 Rear 10mm
Date: 2020-6-14
Electronics: DAE4 Sn777
Medium: head 750 MHz
Medium parameters used: f = 782 MHz; σ = 0.927 mho/m; εr = 42.03; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE750-FDD13 782 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(10.07,10.07,10.07)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.448 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.36 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.497 W/kg
SAR(1 g) = 0.354 W/kg; SAR(10 g) = 0.266 W/kg
Maximum value of SAR (measured) = 0.441 W/kg

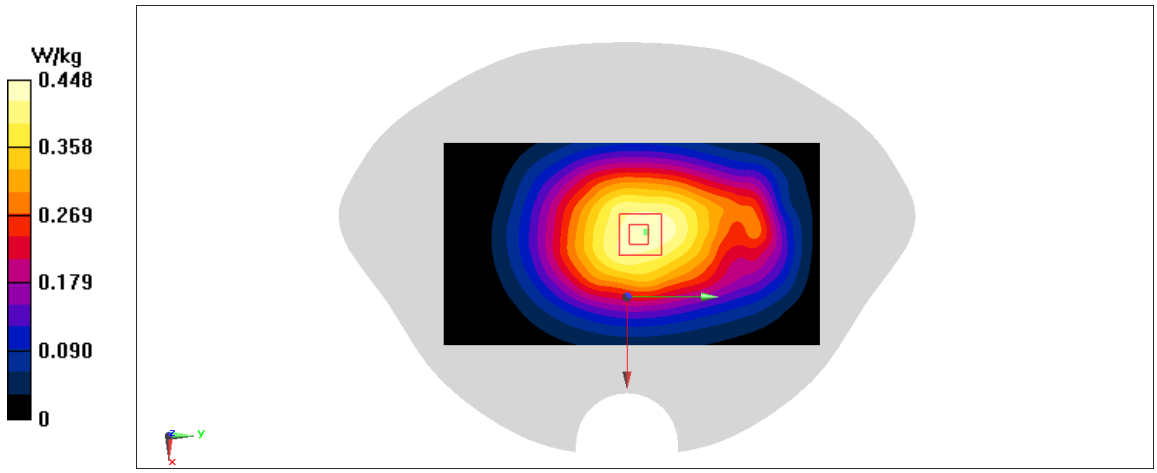


Fig A.25

LTE1700-FDD66_CH132072 Left Cheek
Date: 2020-6-16
Electronics: DAE4 Sn777
Medium: head 1750 MHz
Medium parameters used: f = 1720 MHz; σ = 1.346 mho/m; εr = 40.451; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE1700-FDD66 782 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(8.41,8.41,8.41)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.202 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.478 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.244 W/kg
SAR(1 g) = 0.167 W/kg; SAR(10 g) = 0.106 W/kg
Maximum value of SAR (measured) = 0.179 W/kg

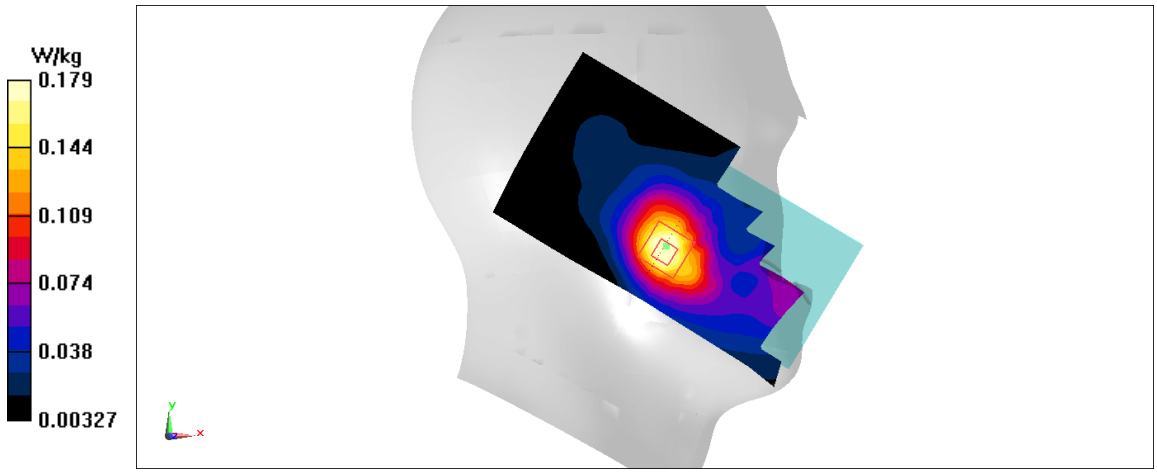


Fig A.26

LTE1700-FDD66_CH132072 1RB-Middle Rear 15mm
Date: 2020-6-16
Electronics: DAE4 Sn777
Medium: body 1750 MHz
Medium parameters used: f = 1720 MHz; σ = 1.346 mho/m; εr = 40.451; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE1700-FDD66 2510 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(8.41,8.41,8.41)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.32 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.169 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.41 W/kg
SAR(1 g) = 0.834 W/kg; SAR(10 g) = 0.474 W/kg
Maximum value of SAR (measured) = 1.17 W/kg

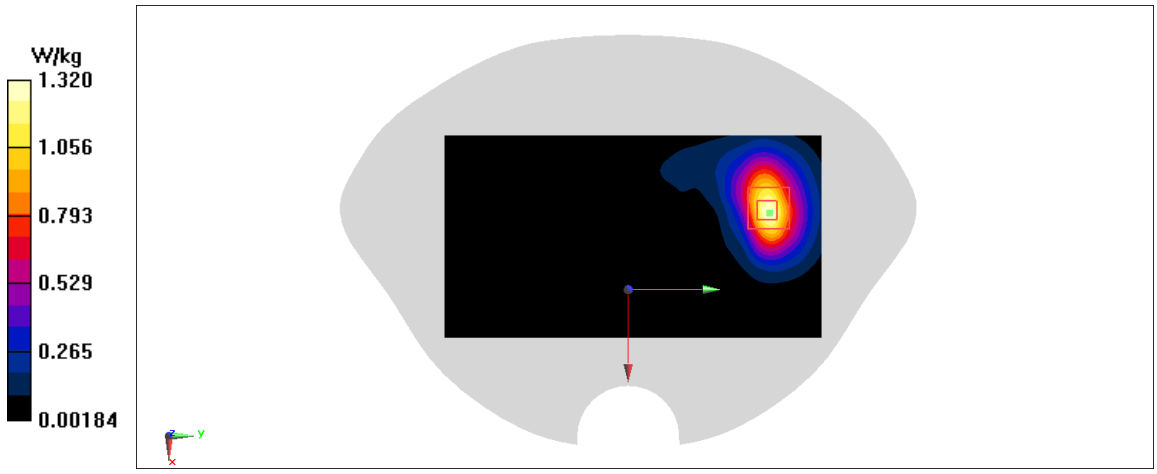


Fig A.27

LTE1700-FDD66_CH132322 Bottom 10mm
Date: 2020-6-16
Electronics: DAE4 Sn777
Medium: head 1750 MHz
Medium parameters used: f = 1745 MHz; σ = 1.358 mho/m; εr = 40.412; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: LTE1700-FDD66 782 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(8.41,8.41,8.41)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.61 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.15 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.87 W/kg
SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.53 W/kg
Maximum value of SAR (measured) = 1.52 W/kg

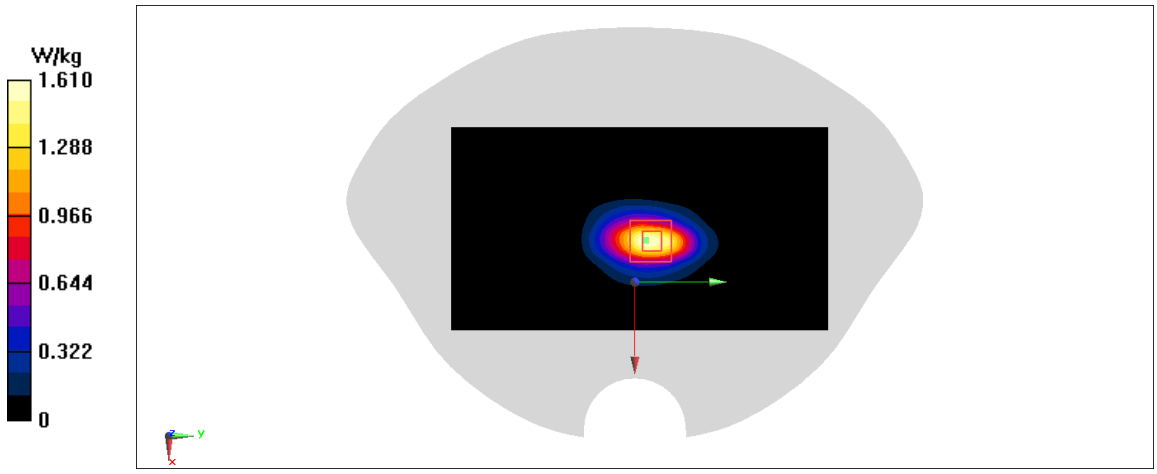


Fig A.28

WLAN2450_CH11 11b 1M_Left Cheek
Date: 2020-6-18
Electronics: DAE4 Sn777
Medium: head 2450 MHz
Medium parameters used: f = 2462 MHz; σ = 1.824 mho/m; εr = 39.21; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: WLAN2450 2462 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(7.65,7.65,7.65)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.343 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.575 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.380 W/kg
SAR(1 g) = 0.192 W/kg; SAR(10 g) = 0.1 W/kg
Maximum value of SAR (measured) = 0.311 W/kg

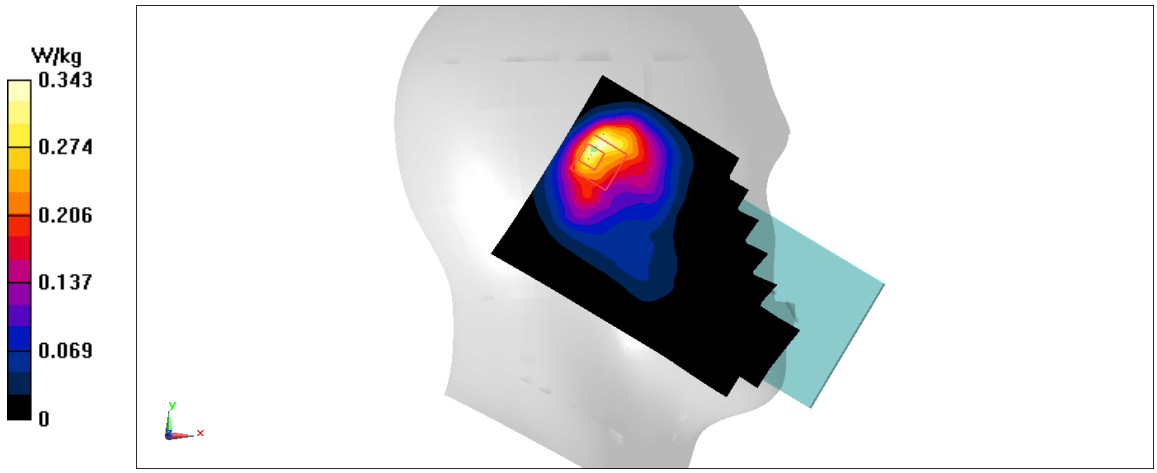


Fig A.29

WLAN2450_CH11 Rear 10mm
Date: 2020-6-18
Electronics: DAE4 Sn777
Medium: head 2450 MHz
Medium parameters used: f = 2462 MHz; σ = 1.824 mho/m; εr = 39.21; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: WLAN2450 2462 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(7.65,7.65,7.65)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.202 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.503 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.263 W/kg
SAR(1 g) = 0.117 W/kg; SAR(10 g) = 0.053 W/kg
Maximum value of SAR (measured) = 0.204 W/kg

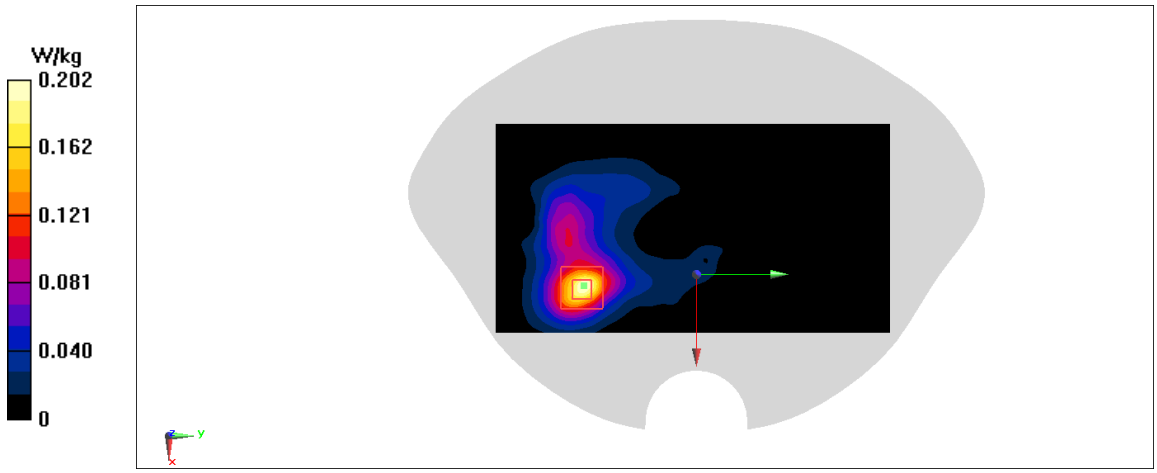


Fig A.30

WLAN_CH52 11a 6M_Left Cheek
Date: 2020-6-18
Electronics: DAE4 Sn777
Medium: head 5GHz
Medium parameters used: f = 5260 MHz; σ =4.503mho/m; εr =34.479 ; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: WLAN 5260 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617(5.39, 5.39, 5.39)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.812 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.771 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.285 W/kg; SAR(10 g) = 0.071 W/kg
Maximum value of SAR (measured) = 0.771 W/kg

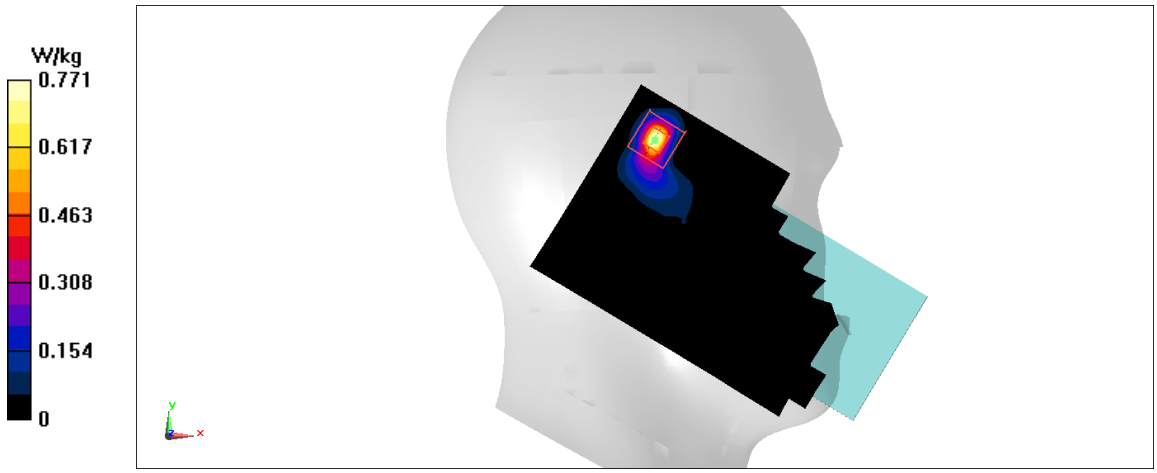


Fig A.31

WLAN_CH144 Rear 10mm
Date: 2020-6-18
Electronics: DAE4 Sn777
Medium: head 5GHz
Medium parameters used: f = 5720 MHz; σ =4.966 mho/m; εr =33.678 ; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: WLAN 5720 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617(5.1, 5.1, 5.1)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.383 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.6910 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.592 W/kg
SAR(1 g) = 0.139 W/kg; SAR(10 g) = 0.045 W/kg
Maximum value of SAR (measured) = 0.352 W/kg

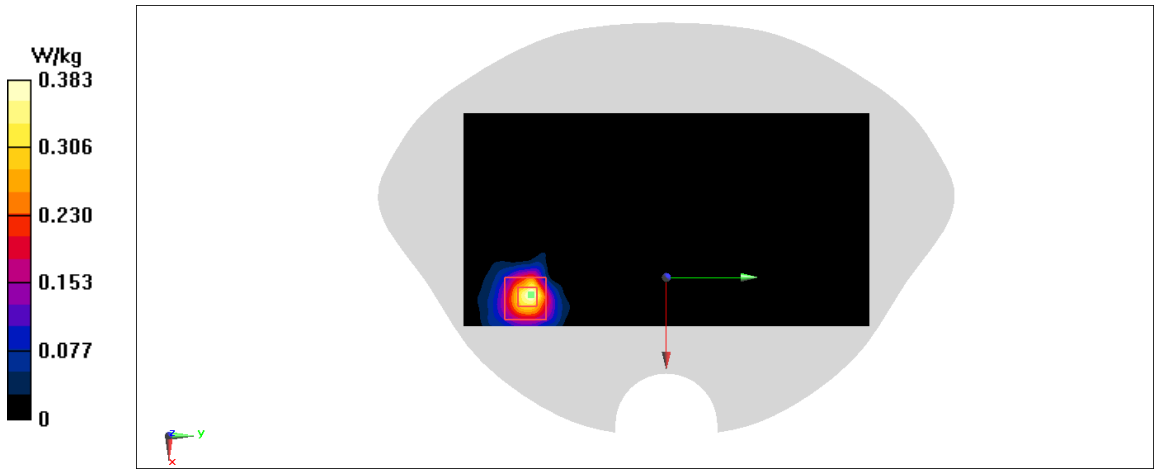


Fig A.32

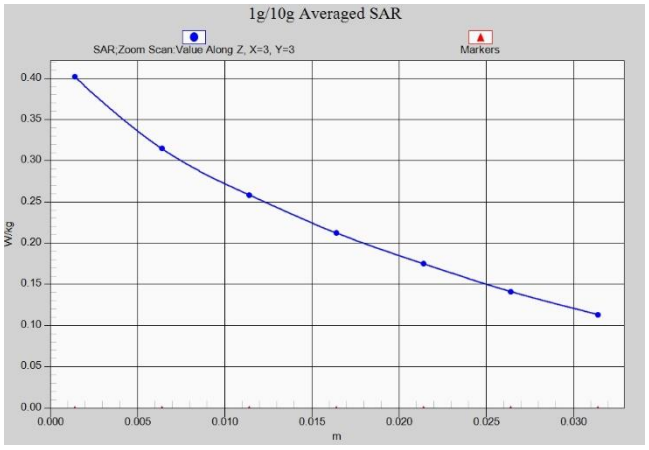


Fig. 1-1 Z-Scan at power reference point (GSM850 Head)

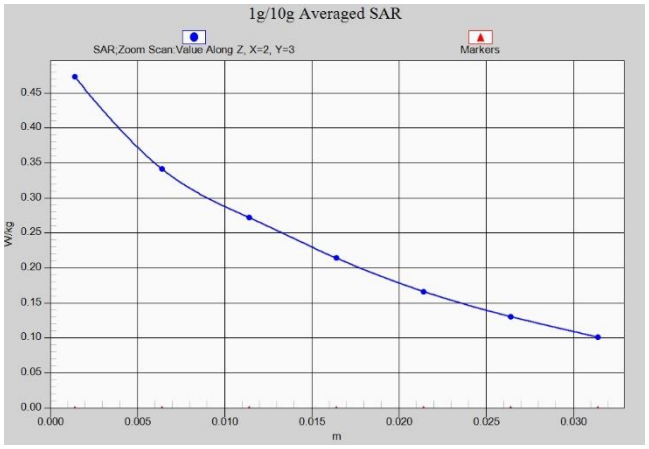


Fig. 1-2 Z-Scan at power reference point (GSM850 Body)

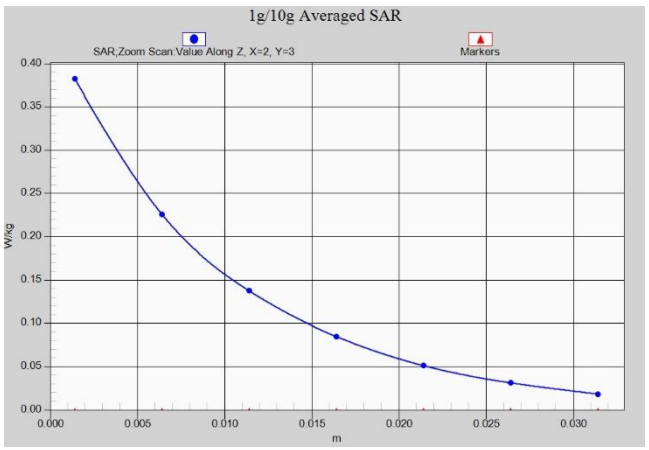


Fig. 1-3 Z-Scan at power reference point (PCS1900 head)

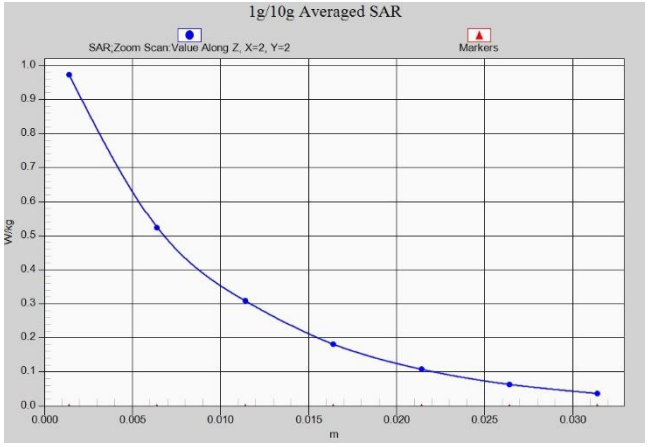


Fig. 1-4 Z-Scan at power reference point (PCS1900 Body)

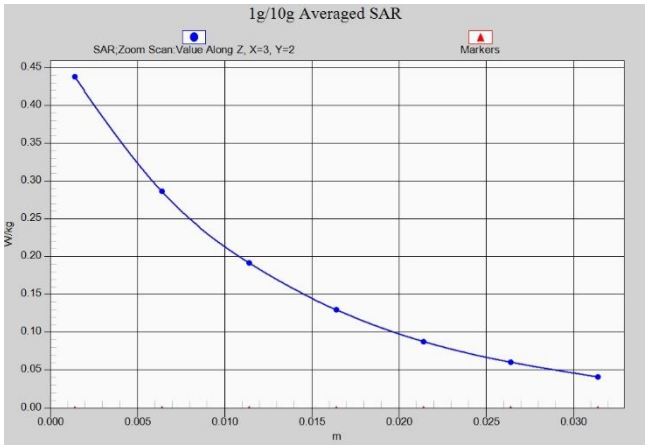


Fig. 1-5 Z-Scan at power reference point (WCDMA1900 Head)

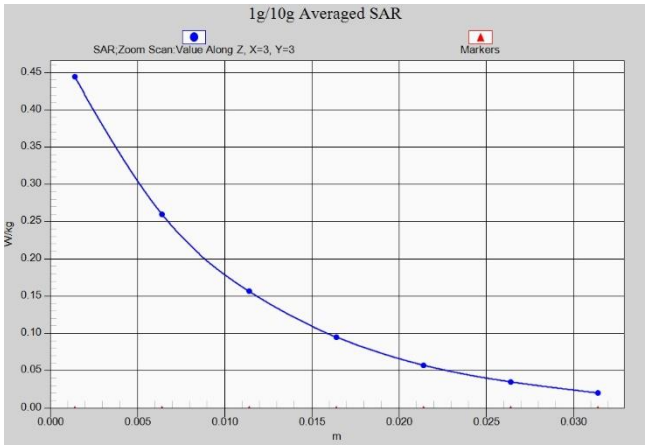


Fig. 1-6 Z-Scan at power reference point (WCDMA1900 Body)

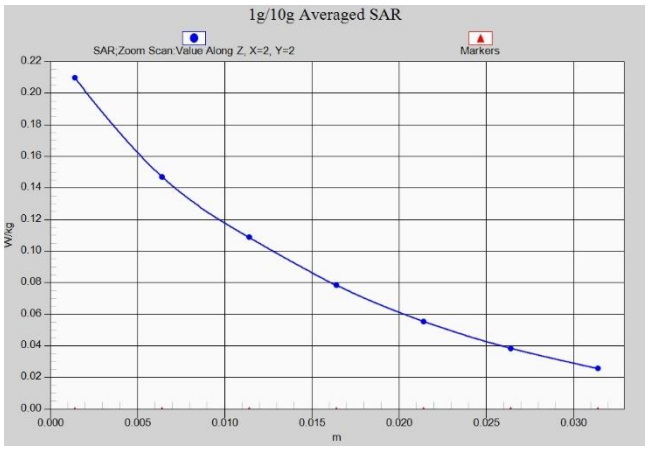


Fig. 1-7 Z-Scan at power reference point (WCDMA1700 Head)

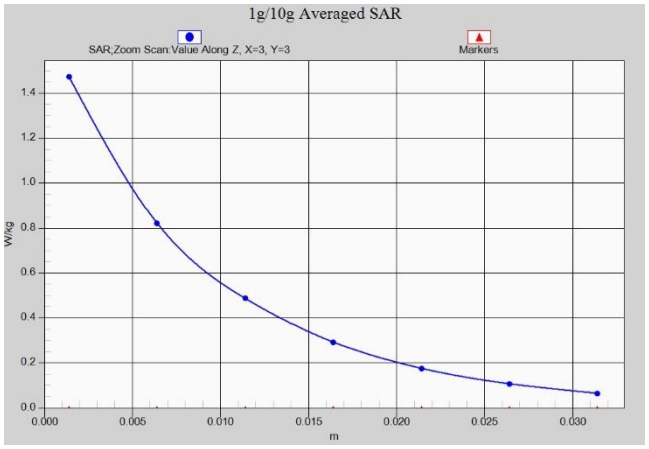


Fig. 1-8 Z-Scan at power reference point (WCDMA1700 Body)

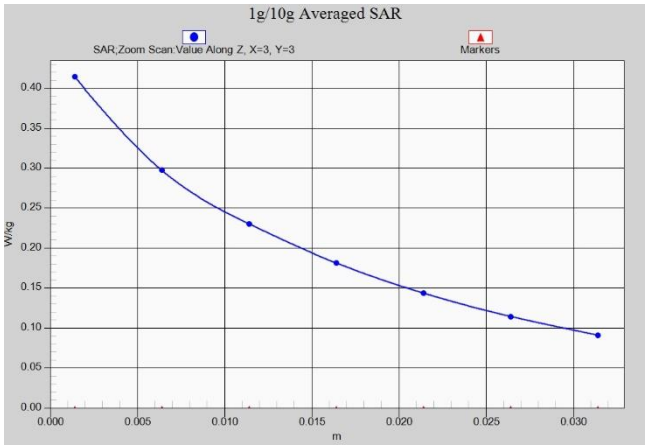


Fig. 1-9 Z-Scan at power reference point (WCDMA850 Head)

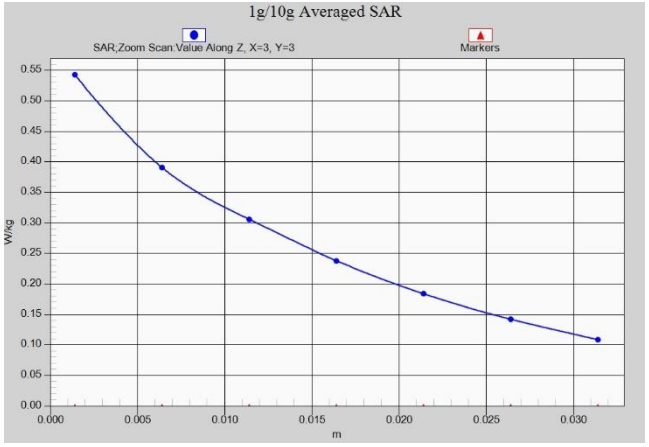


Fig. 1-10 Z-Scan at power reference point (WCDMA850 Body)

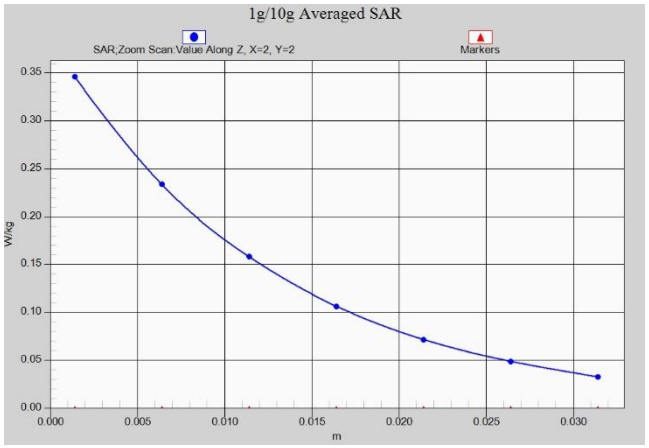


Fig. 1-11 Z-Scan at power reference point (LTE Band 2 Head)

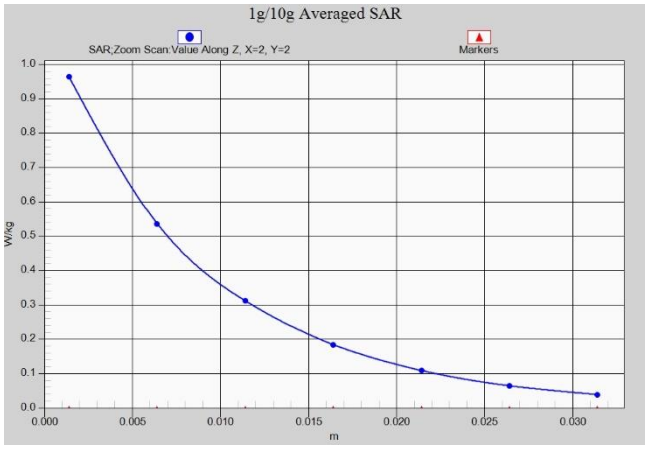


Fig. 1-12 Z-Scan at power reference point (LTE Band2 Body)

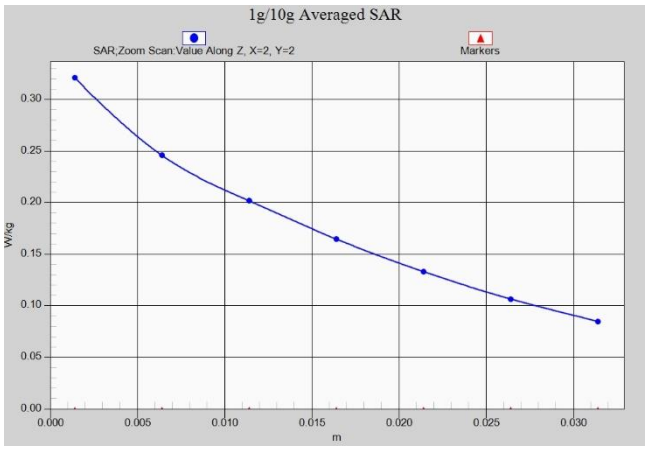


Fig. 1-13 Z-Scan at power reference point (LTE Band 5 Head)

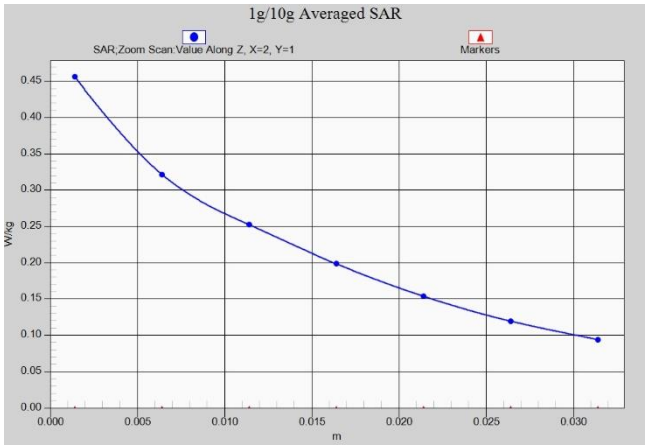


Fig. 1-14 Z-Scan at power reference point (LTE Band 5 Body)

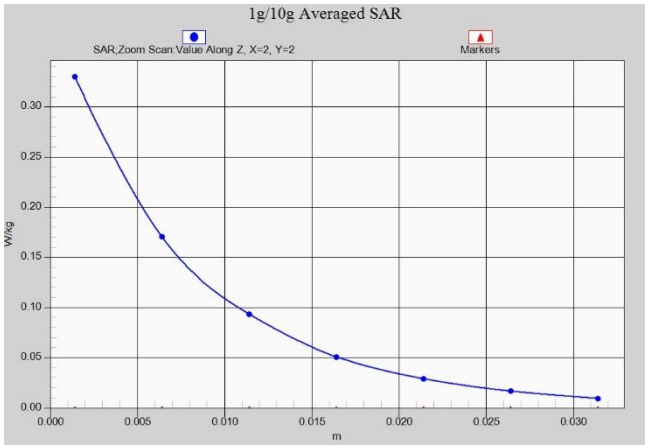


Fig. 1-15 Z-Scan at power reference point (LTE Band 7 Head)

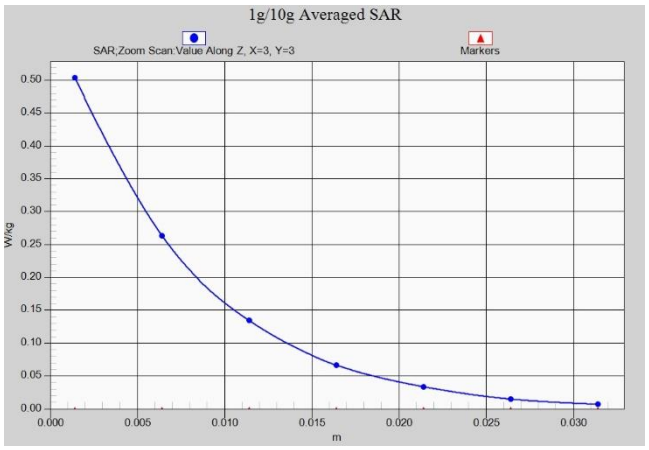


Fig. 1-16 Z-Scan at power reference point (LTE Band 7 Body)

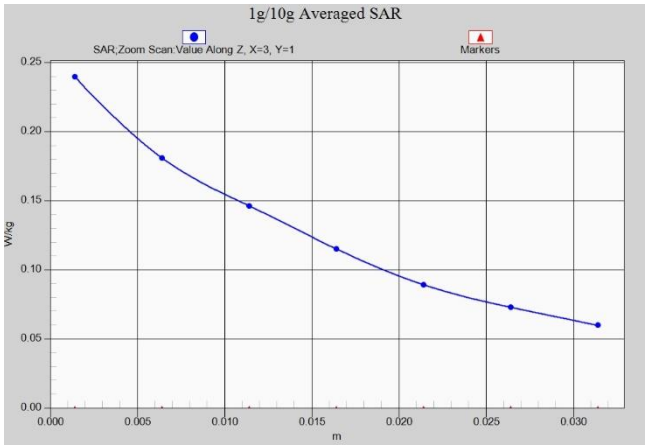


Fig. 1-17 Z-Scan at power reference point (LTE Band12 Head)

Fig. 1-18 Z-Scan at power reference point (LTE Band12 Body)

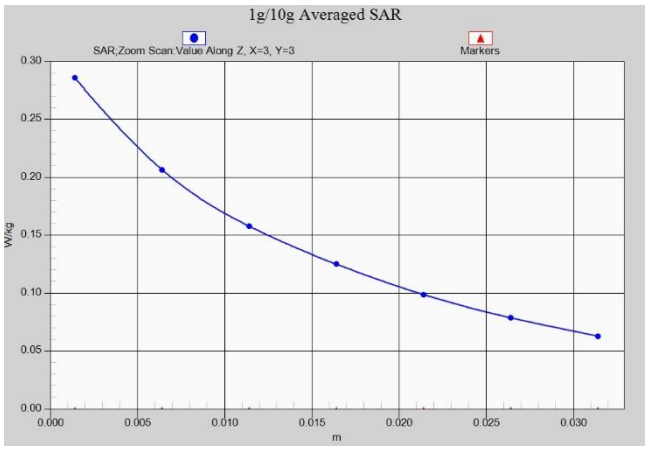


Fig. 1-19 Z-Scan at power reference point (LTE Band13 Head)

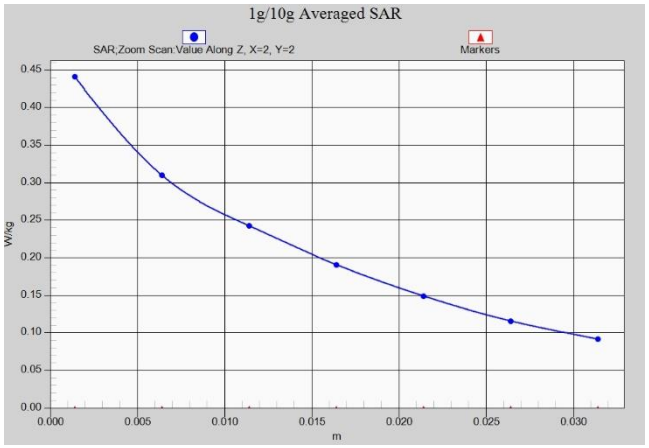


Fig. 1-20 Z-Scan at power reference point (LTE Band13 Body)

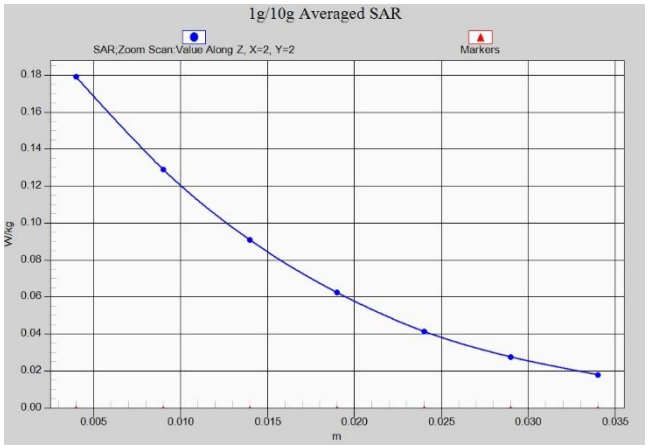


Fig. 1-21 Z-Scan at power reference point (LTE Band66 Head)

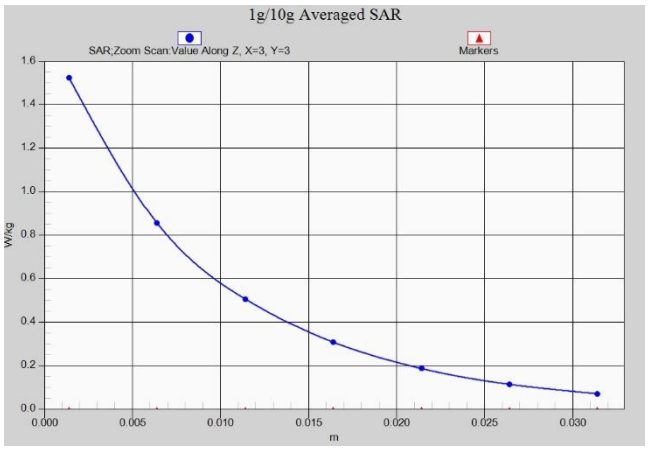


Fig. 1-22 Z-Scan at power reference point (LTE Band66 Body)

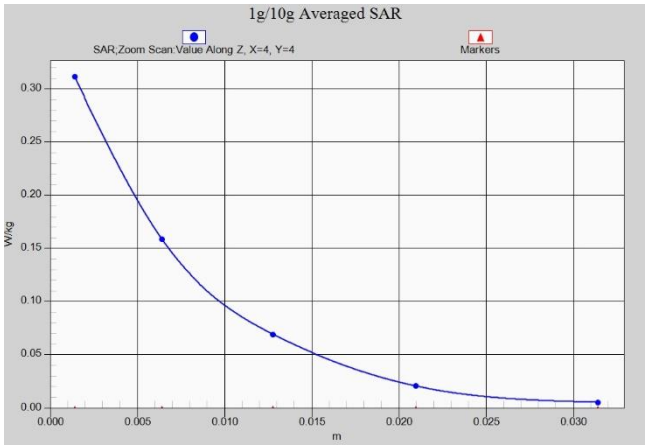


Fig. 1-23 Z-Scan at power reference point (2450 MHz Head)

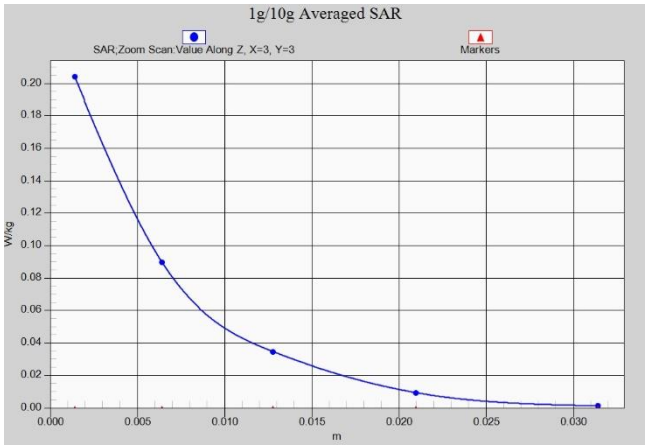


Fig. 1-24 Z-Scan at power reference point (2450 MHz Body)

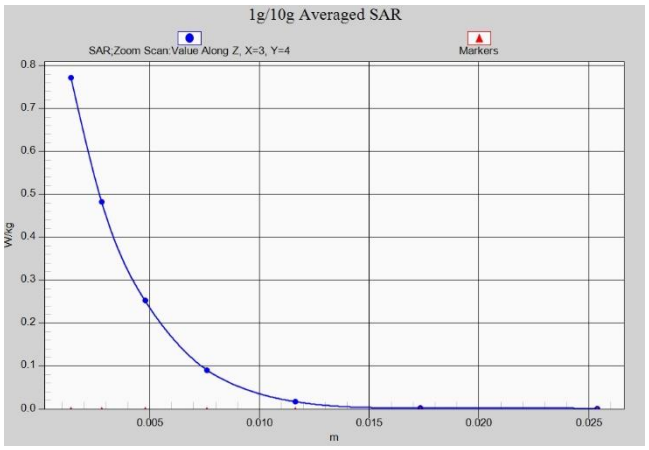


Fig. 1-25 Z-Scan at power reference point (5 GHz Head)

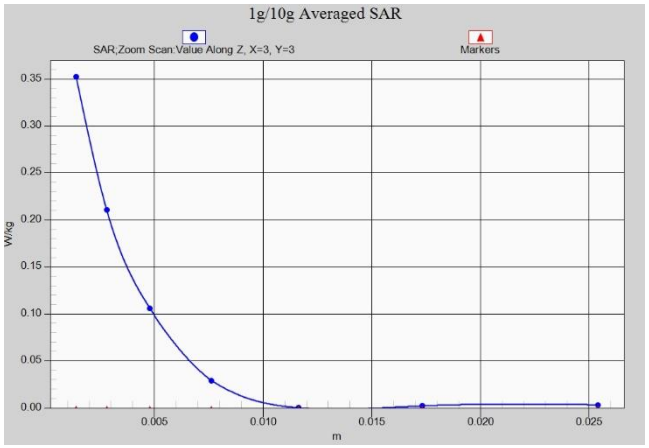


Fig. 1-26 Z-Scan at power reference point (5 GHz Body)

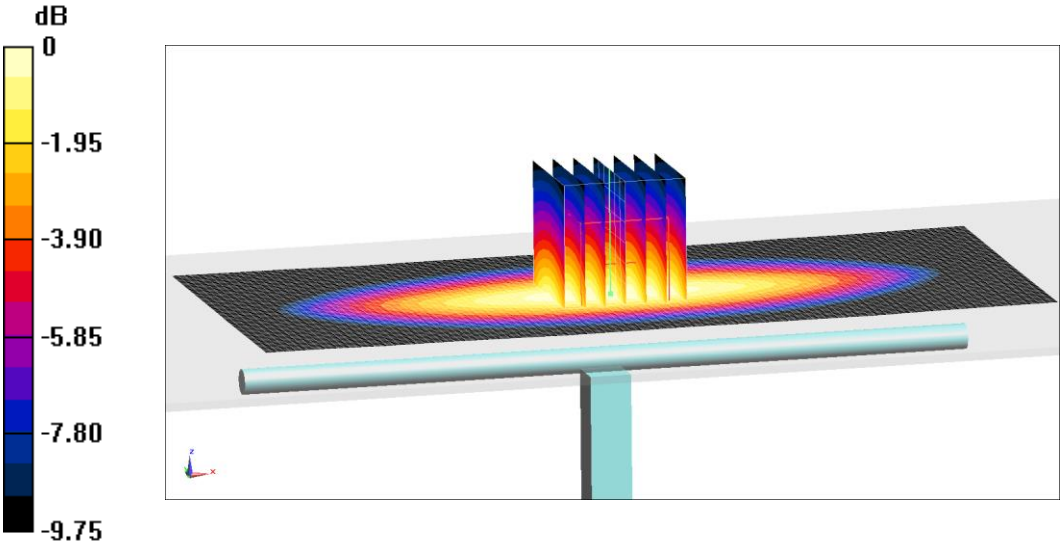
ANNEX B System Verification Results

750 MHz

Date: 6/14/2020
Electronics: DAE4 Sn777
Medium: Head 750 MHz
Medium parameters used: f = 750 MHz; σ =0.897 mho/m; ε_r = 42.07; ρ = 1000 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 – SN3617 ConvF(10.07,10.07,10.07)

System Validation /Area Scan (81x191x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 59.25 V/m; Power Drift = -0.1
Fast SAR: SAR(1 g) = 2.1 W/kg; SAR(10 g) = 1.41 W/kg
Maximum value of SAR (interpolated) = 2.78 W/kg

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value =59.25 V/m; Power Drift = -0.1 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) = 2.89 W/kg



0 dB = 2.89 W/kg = 4.61 dB W/kg

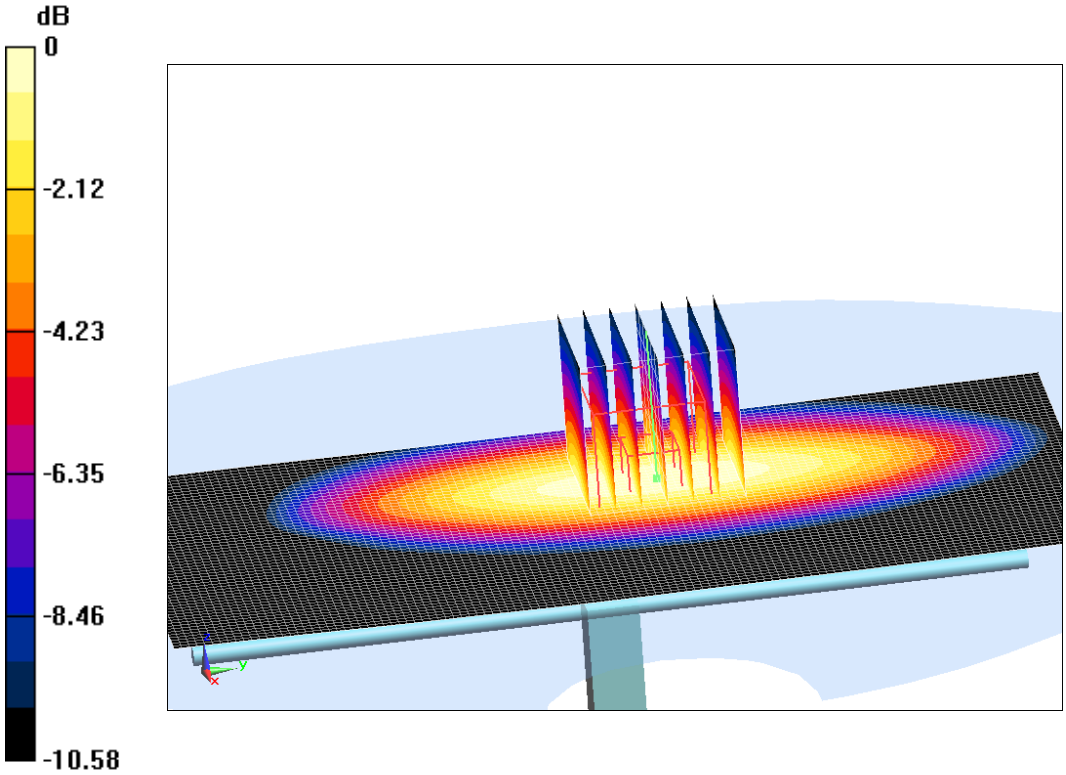
Fig.B.1 validation 750 MHz 250mW

835 MHz

Date: 6/15/2020
Electronics: DAE4 Sn777
Medium: Head 835 MHz
Medium parameters used: f = 835 MHz; σ =0.884 mho/m; ε_r = 41.45; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC Liquid Temperature: 22.3ºC
Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(9.66,9.66,9.66)

System Validation /Area Scan (81x191x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 63.79 V/m; Power Drift = -0.05
Fast SAR: SAR(1 g) = 2.43 W/kg; SAR(10 g) = 1.6 W/kg
Maximum value of SAR (interpolated) = 3.12 W/kg

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value =63.79 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 3.63 W/kg
SAR(1 g) = 2.44 W/kg; SAR(10 g) = 1.56 W/kg
Maximum value of SAR (measured) = 3.17 W/kg



0 dB = 3.17 W/kg = 5.01 dB W/kg

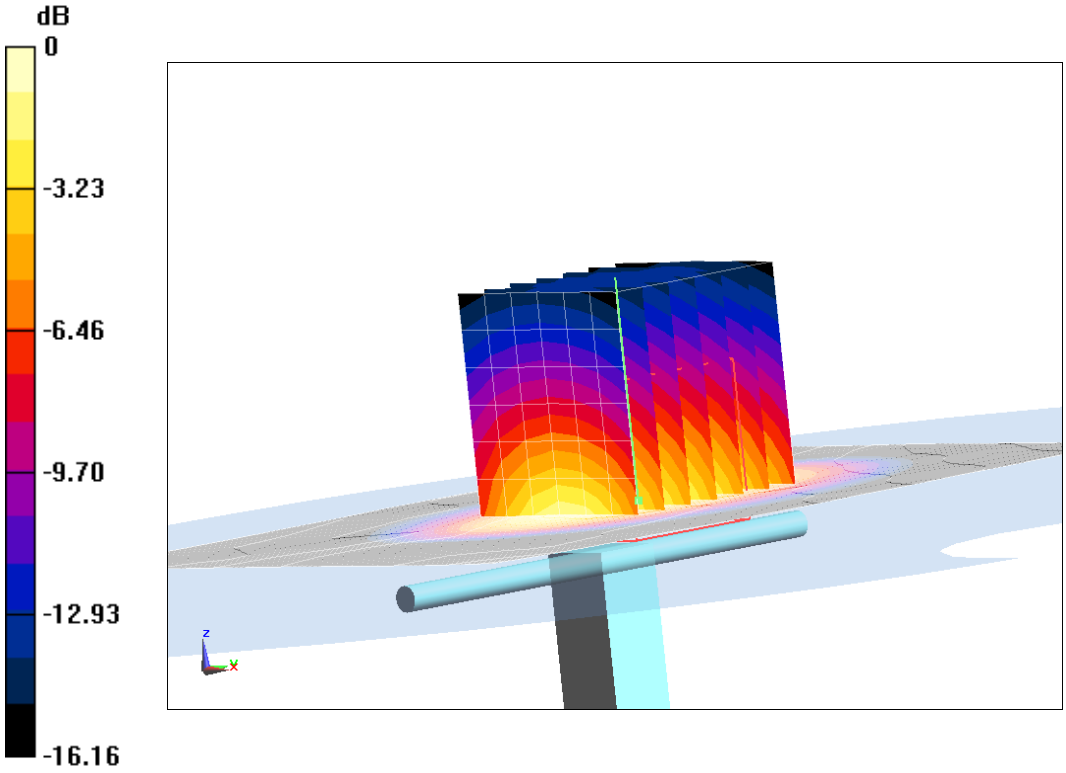
Fig.B.2 validation 835 MHz 250mW

1750 MHz

Date: 6/16/2020
Electronics: DAE4 Sn777
Medium: Head 1750 MHz
Medium parameters used: f = 1750 MHz; σ =1.374 mho/m; ε_r = 39.44; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC Liquid Temperature: 22.3ºC
Communication System: CW Frequency: 1750 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3617 ConvF(8.41,8.41,8.41)

System Validation /Area Scan (81x191x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 105.19 V/m; Power Drift = -0.04
Fast SAR: SAR(1 g) = 9.23 W/kg; SAR(10 g) = 4.78 W/kg
Maximum value of SAR (interpolated) = 14.17 W/kg

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value =105.19 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 16.47 W/kg
SAR(1 g) = 9.03 W/kg; SAR(10 g) = 4.81 W/kg
Maximum value of SAR (measured) = 14.02 W/kg



0 dB = 14.02 W/kg = 11.47 dB W/kg

Fig.B.3 validation 1750 MHz 250mW