Table 14.2-10: 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)
MHz	Ch.										
1900	19100	1RB_Mid	Front	/	23.81	24	0.316	**0.33**	0.581	**0.61**	0.05
1900	19100	1RB_Mid	Rear	Fig.10	23.81	24	0.350	**0.37**	0.641	**0.67**	-0.14
1900	19100	1RB_Mid	Left	/	23.81	24	0.062	**0.06**	0.099	**0.10**	0.05
1900	19100	1RB_Mid	Right	/	23.81	24	0.147	**0.15**	0.252	**0.26**	0.03
1900	19100	1RB_Mid	Bottom	/	23.81	24	0.284	**0.30**	0.506	**0.53**	-0.07
1900	19100	50RB_High	Front	/	23.00	23	0.252	**0.25**	0.455	**0.46**	-0.04
1900	19100	50RB_High	Rear	/	23.00	23	0.277	**0.28**	0.502	**0.50**	-0.07
1900	19100	50RB_High	Left	/	23.00	23	0.050	**0.05**	0.078	**0.08**	0.03
1900	19100	50RB_High	Right	/	23.00	23	0.115	**0.12**	0.199	**0.20**	-0.07
1900	19100	50RB_High	Bottom	/	23.00	23	0.231	**0.23**	0.413	**0.41**	-0.1

Note1: The distance between the EUT and the phantom bottom is 10mm.
Note2: The LTE mode is QPSK_20MHz.

Table 14.2-11: SAR Values (LTE Band4 - 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)
MHz	Ch.											
1720	20050	1RB_Mid	Left	Touch	/	23.48	24	0.096	**0.11**	0.157	**0.18**	0.07
1720	20050	1RB_Mid	Left	Tilt	/	23.48	24	0.079	**0.09**	0.155	**0.17**	0.09
1720	20050	1RB_Mid	Right	Touch	Fig.11	23.48	24	0.161	**0.18**	0.248	**0.28**	0.12
1720	20050	1RB_Mid	Right	Tilt	/	23.48	24	0.072	**0.08**	0.121	**0.14**	0.12
1720	20050	50RB_High	Left	Touch	/	22.71	23	0.086	**0.09**	0.138	**0.15**	0.05
1720	20050	50RB_High	Left	Tilt	/	22.71	23	0.061	**0.07**	0.121	**0.13**	0.07
1720	20050	50RB_High	Right	Touch	/	22.71	23	0.128	**0.14**	0.209	**0.22**	0.14
1720	20050	50RB_High	Right	Tilt	/	22.71	23	0.060	**0.06**	0.099	**0.11**	0.03

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-12: SAR Values (LTE Band4 - 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)
MHz	Ch.										
1720	20050	1RB_Mid	Front	/	23.48	24	0.254	**0.29**	0.398	**0.45**	-0.04
1720	20050	1RB_Mid	Rear	Fig.12	23.48	24	0.277	**0.31**	0.409	**0.46**	-0.09
1720	20050	1RB_Mid	Left	/	23.48	24	0.080	**0.09**	0.134	**0.15**	-0.19
1720	20050	1RB_Mid	Right	/	23.48	24	0.202	**0.23**	0.353	**0.40**	0.04
1720	20050	1RB_Mid	Bottom	/	23.48	24	0.154	**0.17**	0.264	**0.30**	-0.02
1720	20050	50RB_High	Front	/	22.71	23	0.221	**0.24**	0.347	**0.37**	-0.07
1720	20050	50RB_High	Rear	/	22.71	23	0.224	**0.24**	0.348	**0.37**	-0.15
1720	20050	50RB_High	Left	/	22.71	23	0.069	**0.07**	0.115	**0.12**	-0.12
1720	20050	50RB_High	Right	/	22.71	23	0.160	**0.17**	0.278	**0.30**	0.17
1720	20050	50RB_High	Bottom	/	22.71	23	0.130	**0.14**	0.222	**0.24**	-0.01

Note1: The distance between the EUT and the phantom bottom is 10mm.
Note2: The LTE mode is QPSK_20MHz.

Table 14.2-13: SAR Values (LTE Band7 - 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)
MHz	Ch.											
2510	20850	1RB_Mid	Left	Touch	/	23.79	24.5	0.119	**0.14**	0.225	**0.26**	0.08
2510	20850	1RB_Mid	Left	Tilt	/	23.79	24.5	0.092	**0.11**	0.175	**0.21**	0.04
2510	20850	1RB_Mid	Right	Touch	Fig.13	23.79	24.5	0.140	**0.16**	0.253	**0.30**	0.08
2510	20850	1RB_Mid	Right	Tilt	/	23.79	24.5	0.062	**0.07**	0.115	**0.14**	0.07
2510	20850	50RB_Low	Left	Touch	/	22.77	23.5	0.088	**0.10**	0.163	**0.19**	0.04
2510	20850	50RB_Low	Left	Tilt	/	22.77	23.5	0.063	**0.07**	0.120	**0.14**	0.03
2510	20850	50RB_Low	Right	Touch	/	22.77	23.5	0.095	**0.11**	0.178	**0.21**	0.11
2510	20850	50RB_Low	Right	Tilt	/	22.77	23.5	0.048	**0.06**	0.090	**0.11**	0.05

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-14: SAR Values (LTE Band7 - 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)
MHz	Ch.										
2510	20850	1RB_Mid	Front	/	23.79	24.5	0.236	**0.28**	0.464	**0.55**	0.12
2510	20850	1RB_Mid	Rear	Fig.14	23.79	24.5	0.288	**0.34**	0.585	**0.69**	0.12
2510	20850	1RB_Mid	Left	/	23.79	24.5	0.051	**0.06**	0.092	**0.11**	-0.1
2510	20850	1RB_Mid	Right	/	23.79	24.5	0.168	**0.20**	0.325	**0.38**	-0.05
2510	20850	1RB_Mid	Bottom	/	23.79	24.5	0.242	**0.28**	0.573	**0.67**	0.11
2510	20850	50RB_Low	Front	/	22.77	23.5	0.176	**0.21**	0.343	**0.41**	0.15
2510	20850	50RB_Low	Rear	/	22.77	23.5	0.213	**0.25**	0.418	**0.49**	0.01
2510	20850	50RB_Low	Left	/	22.77	23.5	0.038	**0.05**	0.069	**0.08**	-0.13
2510	20850	50RB_Low	Right	/	22.77	23.5	0.122	**0.14**	0.236	**0.28**	-0.02
2510	20850	50RB_Low	Bottom	/	22.77	23.5	0.174	**0.21**	0.416	**0.49**	0.19

Note1: The distance between the EUT and the phantom bottom is 10mm.
Note2: The LTE mode is QPSK_20MHz.

Table 14.2-15: SAR Values (LTE Band13 - 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)
MHz	Ch.											
782	23230	1RB_Mid	Left	Touch	Fig.15	23.79	24.5	0.150	**0.18**	0.190	**0.22**	0.02
782	23230	1RB_Mid	Left	Tilt	/	23.79	24.5	0.097	**0.11**	0.138	**0.16**	-0.01
782	23230	1RB_Mid	Right	Touch	/	23.79	24.5	0.110	**0.13**	0.159	**0.19**	-0.02
782	23230	1RB_Mid	Right	Tilt	/	23.79	24.5	0.092	**0.11**	0.134	**0.16**	0.04
782	23230	25RB_High	Left	Touch	/	22.92	23.5	0.120	**0.14**	0.182	**0.21**	0.03
782	23230	25RB_High	Left	Tilt	/	22.92	23.5	0.081	**0.09**	0.115	**0.13**	0.04
782	23230	25RB_High	Right	Touch	/	22.92	23.5	0.086	**0.10**	0.126	**0.14**	-0.02
782	23230	25RB_High	Right	Tilt	/	22.92	23.5	0.072	**0.08**	0.105	**0.12**	-0.06

Note1: The LTE mode is QPSK_10MHz.

Table 14.2-16: SAR Values (LTE Band13 - 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)
MHz	Ch.										
782	23230	1RB_Mid	Front	/	23.79	24.5	0.189	**0.22**	0.264	**0.31**	0.02
782	23230	1RB_Mid	Rear	Fig.16	23.79	24.5	0.319	**0.38**	0.423	**0.50**	0
782	23230	1RB_Mid	Left	/	23.79	24.5	0.221	**0.26**	0.324	**0.38**	0.05
782	23230	1RB_Mid	Right	/	23.79	24.5	0.141	**0.17**	0.208	**0.25**	0.12
782	23230	1RB_Mid	Bottom	/	23.79	24.5	0.047	**0.06**	0.080	**0.09**	-0.07
782	23230	25RB_High	Front	/	22.92	23.5	0.159	**0.18**	0.221	**0.25**	0.04
782	23230	25RB_High	Rear	/	22.92	23.5	0.218	**0.25**	0.309	**0.35**	-0.01
782	23230	25RB_High	Left	/	22.92	23.5	0.177	**0.20**	0.259	**0.30**	0.02
782	23230	25RB_High	Right	/	22.92	23.5	0.133	**0.15**	0.218	**0.25**	0.02
782	23230	25RB_High	Bottom	/	22.92	23.5	0.037	**0.04**	0.063	**0.07**	-0.03

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

Note2: The LTE mode is QPSK_10MHz.

Table 14.2-17: SAR Values (LTE Band17 - 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)
MHz	Ch.											
710	23790	1RB_Mid	Left	Touch	Fig.17	23.61	24.5	0.046	**0.06**	0.058	**0.07**	0.07
710	23790	1RB_Mid	Left	Tilt	/	23.61	24.5	0.024	**0.03**	0.034	**0.04**	0.03
710	23790	1RB_Mid	Right	Touch	/	23.61	24.5	0.038	**0.05**	0.055	**0.07**	0.05
710	23790	1RB_Mid	Right	Tilt	/	23.61	24.5	0.022	**0.03**	0.031	**0.04**	0.11
709	23780	25RB_Mid	Left	Touch	/	22.52	23.5	0.041	**0.05**	0.052	**0.06**	0.04
709	23780	25RB_Mid	Left	Tilt	/	22.52	23.5	0.023	**0.03**	0.032	**0.04**	0.17
709	23780	25RB_Mid	Right	Touch	/	22.52	23.5	0.036	**0.05**	0.051	**0.06**	0.01
709	23780	25RB_Mid	Right	Tilt	/	22.52	23.5	0.020	**0.03**	0.029	**0.04**	0.18

Note1: The LTE mode is QPSK_10MHz.

Table 14.2-18: SAR Values (LTE Band17 - 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)
MHz	Ch.										
710	23790	1RB_Mid	Front	/	23.61	24.5	0.064	**0.08**	0.092	**0.11**	-0.06
710	23790	1RB_Mid	Rear	Fig.18	23.61	24.5	0.175	**0.21**	0.222	**0.27**	-0.01
710	23790	1RB_Mid	Left	/	23.61	24.5	0.081	**0.10**	0.118	**0.14**	-0.04
710	23790	1RB_Mid	Right	/	23.61	24.5	0.094	**0.12**	0.138	**0.17**	-0.01
710	23790	1RB_Mid	Bottom	/	23.61	24.5	0.015	**0.02**	0.026	**0.03**	0.18
709	23780	25RB_Mid	Front	/	22.52	23.5	0.073	**0.09**	0.102	**0.13**	-0.02
709	23780	25RB_Mid	Rear	/	22.52	23.5	0.121	**0.15**	0.168	**0.21**	-0.01
709	23780	25RB_Mid	Left	/	22.52	23.5	0.064	**0.08**	0.094	**0.12**	-0.02
709	23780	25RB_Mid	Right	/	22.52	23.5	0.074	**0.09**	0.108	**0.14**	0
709	23780	25RB_Mid	Bottom	/	22.52	23.5	0.011	**0.01**	0.021	**0.03**	0.15

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 (WLAN - Head) – other batteries

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)
MHz	Ch.											
2437	6	802.11b	Right	Touch	/	17.51	18	0.412	**0.46**	0.852	**0.95**	0.03

Note1: The battery1 is CAC2960003C2

Table 14.2-20: SAR Values (WCDMA1900 - Body) – other batteries

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)
MHz	Ch.									
1880	9800	Rear	/	23.87	24	0.411	**0.42**	0.770	**0.79**	0.08

Note1: The distance between the EUT and the phantom bottom is 10mm.
Note2: The LTE mode is QPSK_20MHz.
Note3: The battery1 is CAC2960003C2

14.3 SAR results for Standard procedure

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

Table 14.3-1: SAR Values (GSM 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)
MHz	Ch.										
836.6	190	Left	Touch	Fig.1	32.73	33.3	0.251	**0.29**	0.327	**0.37**	-0.02

Table 14.3-2: SAR Values (GSM 850 MHz Band - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C											
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)
MHz	Ch.										
836.6	190	GPRS (1)	Rear	Fig.2	32.72	33.3	0.274	**0.31**	0.481	**0.55**	-0.05

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

Table 14.3-3: SAR Values (GSM 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)
MHz	Ch.										
1909.8	810	Right	Touch	Fig.3	29.48	30.3	0.105	**0.13**	0.168	**0.20**	0.16

Table 14.3-4: SAR Values (GSM 1900 MHz Band - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C											
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)
MHz	Ch.										
1909.8	810	GPRS (2)	Rear	Fig.4	27.27	29	0.311	**0.46**	0.582	**0.87**	-0.06

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

Table 14.3-5: 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)
MHz	Ch.										
846.6	4233	Left	Touch	Fig.5	22.97	24	0.232	**0.29**	0.304	**0.39**	-0.18

Table 14.3-6: 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)
MHz	Ch.									
836.4	4182	Rear	Fig.6	22.80	24	0.204	**0.27**	0.352	**0.46**	-0.03

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

Table 14.3-7: 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)
MHz	Ch.										
1852.4	9262	Right	Touch	Fig.7	23.48	24	0.293	**0.33**	0.464	**0.52**	0.12

Table 14.3-8: 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)
MHz	Ch.									
1880	9400	Rear	Fig.8	23.87	24	0.457	**0.47**	0.856	**0.88**	0.02

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

Table 14.3-9: 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)
MHz	Ch.											
1900	19100	1RB_Mid	Right	Touch	Fig.9	23.81	24	0.200	**0.21**	0.325	**0.34**	-0.17

Note1: The LTE mode is QPSK_20MHz.

Table 14.3-10: 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)
MHz	Ch.										
1900	19100	1RB_Mid	Rear	Fig.10	23.81	24	0.350	**0.37**	0.641	**0.67**	-0.14

Note1: The distance between the EUT and the phantom bottom is 10mm.
Note2: The LTE mode is QPSK_20MHz.

Table 14.3-11: SAR Values (LTE Band4 - 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)
MHz	Ch.											
1720	20050	1RB_Mid	Right	Touch	Fig.11	23.48	24	0.161	**0.18**	0.248	**0.28**	0.12

Note1: The LTE mode is QPSK_20MHz.

Table 14.3-12: SAR Values (LTE Band4 - 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)
MHz	Ch.										
1720	20050	1RB_Mid	Rear	Fig.12	23.48	24	0.277	**0.31**	0.409	**0.46**	-0.09

Note1: The distance between the EUT and the phantom bottom is 10mm.
Note2: The LTE mode is QPSK_20MHz.

Table 14.3-13: SAR Values (LTE Band7 - 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)
MHz	Ch.											
2510	20850	1RB_Mid	Right	Touch	Fig.13	23.79	24.5	0.140	**0.16**	0.253	**0.30**	0.08

Note1: The LTE mode is QPSK_20MHz.

Table 14.3-14: SAR Values (LTE Band7 - 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)
MHz	Ch.										
2510	20850	1RB_Mid	Rear	Fig.14	23.79	24.5	0.288	**0.34**	0.585	**0.69**	0.12

Note1: The distance between the EUT and the phantom bottom is 10mm.
Note2: The LTE mode is QPSK_20MHz.

Table 14.3-15: SAR Values (LTE Band13 - 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)
MHz	Ch.											
782	23230	1RB_Mid	Left	Touch	Fig.15	23.79	24.5	0.150	**0.18**	0.190	**0.22**	0.02

Note1: The LTE mode is QPSK_10MHz.

Table 14.3-16: SAR Values (LTE Band13 - 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)
MHz	Ch.										
782	23230	1RB_Mid	Rear	Fig.16	23.79	24.5	0.319	**0.38**	0.423	**0.50**	0

Note1: The distance between the EUT and the phantom bottom is 10mm.
Note2: The LTE mode is QPSK_10MHz.

Table 14.3-17: SAR Values (LTE Band17 - 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)
MHz	Ch.											
710	23790	1RB_Mid	Left	Touch	Fig.17	23.61	24.5	0.046	**0.06**	0.058	**0.07**	0.07

Note1: The LTE mode is QPSK_10MHz.

Table 14.3-18: SAR Values (LTE Band17 - 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)	
MHz	Ch.											
710	23790	1RB_Mid	Rear	Fig.18	23.61	24.5	0.175	**0.21**	0.222	**0.27**	-0.01	

Note1: The distance between the EUT and the phantom bottom is 10mm.
Note2: The LTE mode is QPSK_10MHz.

14.4 WLAN Evaluation

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

Head Evaluation

Table 14.4-1: SAR Values (WLAN - Head) – 802.11b 1Mbps (Fast SAR)

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)
MHz	Ch.										
2437	6	Left	Touch	/	17.51	18	0.203	**0.23**	0.363	**0.41**	0.12
2437	6	Left	Tilt	/	17.51	18	0.210	**0.24**	0.396	**0.45**	0.07
2437	6	Right	Touch	/	17.51	18	0.419	**0.47**	0.800	**0.90**	0.12
2437	6	Right	Tilt	/	17.51	18	0.353	**0.40**	0.679	**0.76**	-0.12

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

Table 14.4-2: SAR Values (WLAN - Head) – 802.11b 1Mbps (Full SAR)

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)
MHz	Ch.										
2437	6	Right	Touch	Fig.19	17.51	18	0.421	**0.47**	0.866	**0.97**	0.12
2437	6	Right	Tilt	/	17.51	18	0.360	**0.40**	0.748	**0.84**	-0.12
2437	6	Left	Tilt	/	17.51	18	0.217	**0.24**	0.416	**0.47**	0.01
2412	1	Right	Touch	/	17.27	18	0.377	**0.45**	0.772	**0.91**	-0.01
2412	1	Right	Tilt	/	17.27	18	0.331	**0.39**	0.684	**0.81**	0.15

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 14.4-3: SAR Values (WLAN - Head) – 802.11b 1Mbps (Scaled Reported SAR)

Ambient Temperature: 22.9 °C				Liquid Temperature: 22.5 °C			
Frequency		Side	Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
MHz	Ch.						
2437	6	Right	Touch	99.47%	100%	**0.97**	**0.98**

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

Body Evaluation

Table 14.4-4: SAR Values (WLAN - Body) – 802.11b 1Mbps (Fast SAR)

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)
MHz	Ch.									
2437	6	Front	/	17.51	18	0.080	**0.09**	0.151	**0.17**	0.09
2437	6	Rear	/	17.51	18	0.080	**0.09**	0.160	**0.18**	-0.06
2437	6	Left	/	17.51	18	0.062	**0.07**	0.120	**0.13**	0.14
2437	6	Top	/	17.51	18	0.102	**0.11**	0.192	**0.21**	0.05

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

Table 14.4-5: SAR Values (WLAN - Body) – 802.11b 1Mbps (Full SAR)

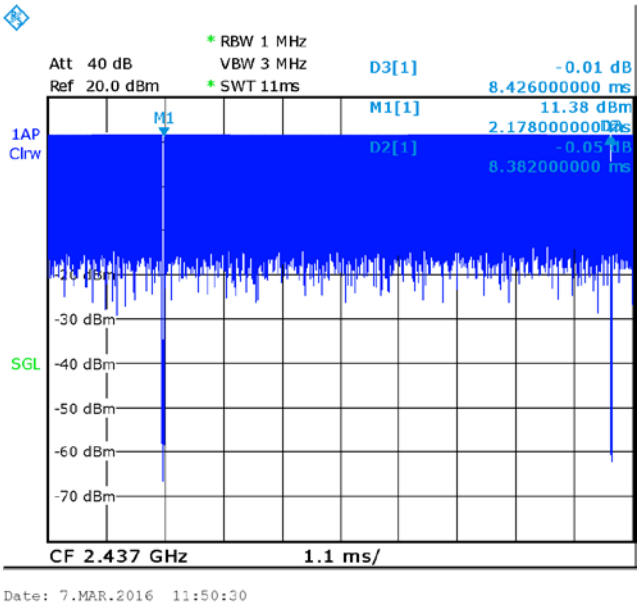
Ambient Temperature: 22.9 °C				Liquid Temperature: 22.5 °C						
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.									
2437	6	Top	Fig.20	17.51	18	0.110	**0.12**	0.205	**0.23**	0.05

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 14.4-6: SAR Values (WLAN - Body) – 802.11b 1Mbps (Scaled Reported SAR)

Ambient Temperature: 22.9 °C			Liquid Temperature: 22.5 °C			
Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
MHz	Ch.					
2437	6	Rear	99.47%	100%	**0.23**	**0.23**

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



Picture 14.1 Duty factor plot

OFDM – 5G

Table 14.4-7: 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				
U-NII-3	X		X	X				
X: maximum(conducted) output power(mW), including tolerance, specified for production units								

Table 14.4-8: Maximum output power specified of WLAN antenna

802.11 mode	a	g	n		ac			
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	35		22	20				
U-NII-3	28		18	16				

- 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.
- For SAR test reduction in the 2.4GHz band, the maximum output specified for production units is 50mW for 802.11b and the highest reported SAR for DSSS is 0.98 W/kg for head, 0.23 W/kg for body.

Table 14.4-9: Maximum output power measured of WLAN antenna, for the applicable OFDM configurations according to the default power measurement procedures for selection initial test configurations

802.11 mode	a	g	n	
BW(MHz)	20	20	20	40
U-NII-1	36/40/44/48 **29/25/30/29**		36/40/44/48 Lower power	38/46 Lower power
U-NII-3	149/153/157/161/165 **21/22/22/21/25**		149/153/157/161/165 Lower power	151/159 Lower power

- 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.

Base on the above table, the initial test position procedure is performed according to the following:

Table 14.4-10: Initial test position evaluation for OFDM – Head

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °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)
MHz	Ch.										
5220	44	Left	Touch	/	14.71	15.5	0.085	**0.10**	0.214	**0.26**	0.08
5220	44	Left	Tilt	Fig.21	14.71	15.5	0.118	**0.14**	0.327	**0.39**	0.08
5220	44	Right	Touch	/	14.71	15.5	0.076	**0.09**	0.214	**0.26**	0.06
5220	44	Right	Tilt	/	14.71	15.5	0.105	**0.13**	0.296	**0.36**	0.07
5825	165	Left	Touch	/	14.04	15	0.078	**0.10**	0.206	**0.26**	0.19
5825	165	Left	Tilt	/	14.04	15	0.121	**0.15**	0.317	**0.40**	0.12
5825	165	Right	Touch	/	14.04	15	0.115	**0.14**	0.297	**0.37**	0.07
5825	165	Right	Tilt	Fig.22	14.04	15	0.133	**0.17**	0.410	**0.51**	0.14

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 14.3-11: SAR Values for Head (Scaled Reported SAR)

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C							
Frequency		Side	Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
MHz	Ch.						
5220	44	Left	Tilt	97.47%	100%	**0.39**	**0.40**
5825	165	Right	Tilt	97.48%	100%	**0.51**	**0.52**

Table 14.3-13: Reported SAR of initial test configuration for head

802.11 mode	**a**	**g**	**n**	
BW(MHz)	**20**	**20**	**20**	**40**
U-NII-1	36/40/44/48 **0.40**		36/40/44/48	38/46
U-NII-3	149/153/157/161/165 **0.52**		149/153/157/161/165	151/159

Table 14.3-14: Initial test position evaluation for OFDM - Body

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °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)
MHz	Ch.									
5220	44	Front	/	14.71	15.5	0.014	**0.02**	0.050	**0.06**	0.09
5220	44	Rear	Fig.23	14.71	15.5	0.140	**0.17**	0.417	**0.50**	0.06
5220	44	Right	/	14.71	15.5	0.019	**0.02**	0.048	**0.06**	0.19
5220	44	Top	/	14.71	15.5	0.115	**0.14**	0.301	**0.36**	0.08
5825	165	Front	/	14.04	15	0.009	**0.01**	0.026	**0.03**	0.09
5825	165	Rear	Fig.24	14.04	15	0.149	**0.19**	0.447	**0.56**	-0.09
5825	165	Right	/	14.04	15	0.034	**0.04**	0.084	**0.11**	0.11
5825	165	Top	/	14.04	15	0.100	**0.12**	0.270	**0.34**	-0.06

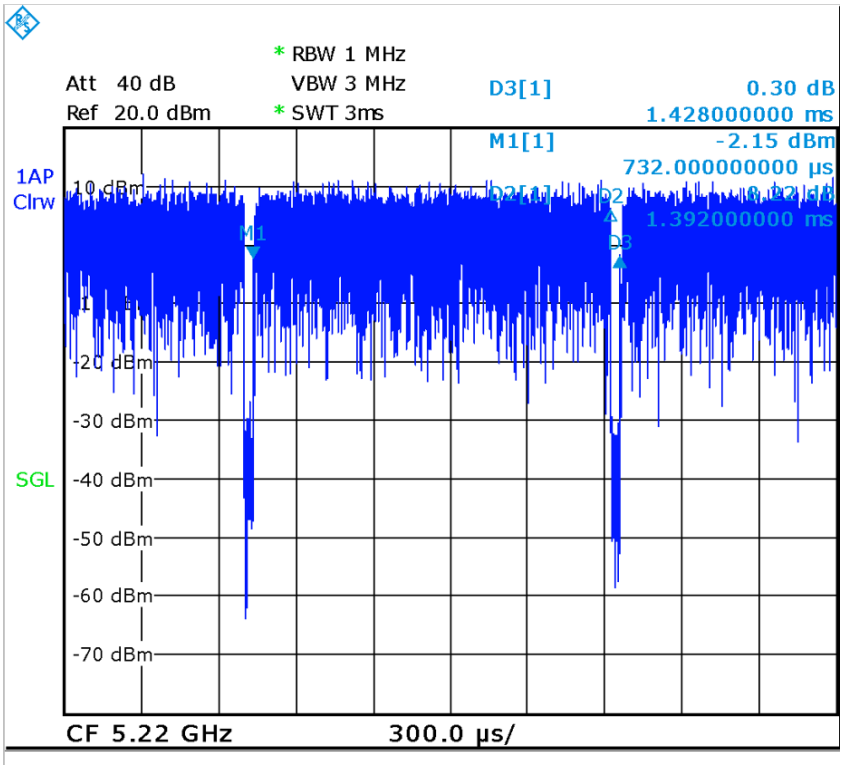
According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit. The scaled reported SAR is presented as below:

Table 14.3-16: SAR Values for Body (Scaled Reported SAR)

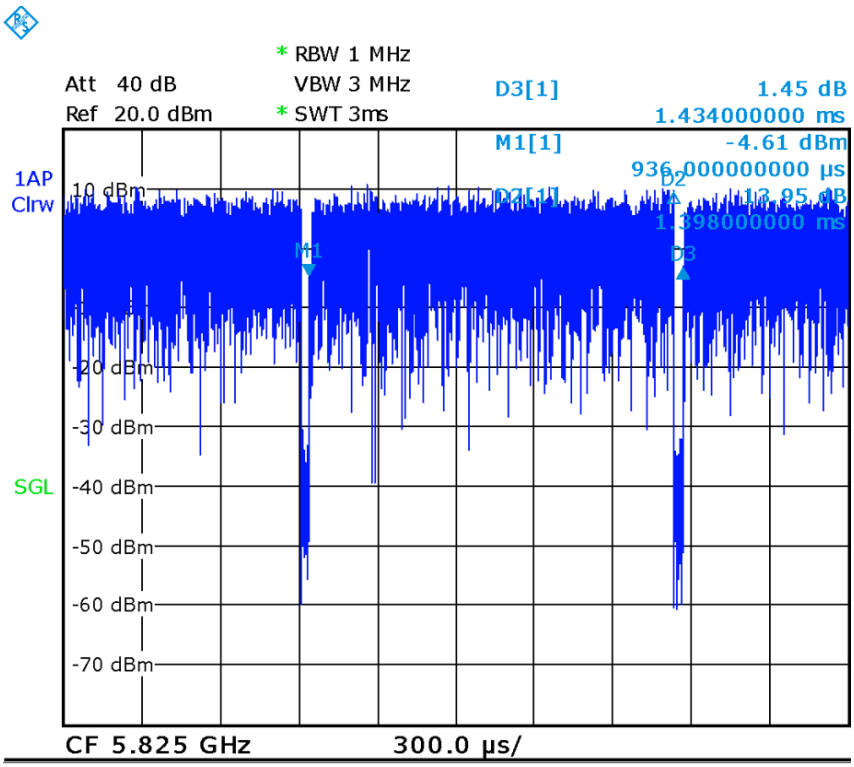
Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C						
Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
MHz	Ch.					
5220	44	Rear	97.47%	100%	**0.50**	**0.51**
5825	165	Rear	97.48%	100%	**0.56**	**0.57**

Table 14.3-17: Reported SAR of initial test configuration for body

802.11 mode	**a**	**g**	**n**	
BW(MHz)	**20**	**20**	**20**	**40**
U-NII-1	36/40/44/48 **0.51**		36/40/44/48	38/46
U-NII-3	149/153/157/161/165 **0.57**		149/153/157/161/165	151/159



Picture 14.2 The plot of duty factor for WLAN-5G channel 44



Picture 14.3 The plot of duty factor for WLAN-5G channel 165

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; steps 2) 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 ≥ 1.45 W/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 WCDMA1900 (1g)

Frequency		Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
MHz	Ch.						
1880	9800	Rear	10	0.856	0.852	1.00	/

Table 15.2: SAR Measurement Variability for Head WLAN (1g)

Frequency		Side	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
MHz	Ch.						
2437	6	Right	Cheek	0.866	0.859	1.01	/

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	5.5	N	1	1	1	5.5	5.5	∞
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	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	RF ambient 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	$u_c' = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$					9.25	9.12	257
Expanded uncertainty (confidence interval of 95 %)	$u_e = 2u_c$					18.5	18.2	

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	6.5	N	1	1	1	6.5	6.5	∞
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	RF ambient 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	4.0	R	$\sqrt{3}$	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	$\sqrt{3}$	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		$u_c' = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$						10.8	10.7	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						21.6	21.4	

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	5.5	N	1	1	1	5.5	5.5	∞
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	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	RF ambient 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	∞
14	Fast SAR z-Approximation	B	7.0	R	$\sqrt{3}$	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	$\sqrt{3}$	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		$u_c' = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						10.1	9.95	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						20.2	19.9	

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	6.5	N	1	1	1	6.5	6.5	∞
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	RF ambient 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		$u_c^{'} = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						13.3	13.2	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						26.6	26.4	

17 MAIN TEST INSTRUMENTS

Table 17.1: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	E5071C	MY46110673	January 26, 2016	One year
02	Power meter	NRVD	102196	March 03, 2016	One year
03	Power sensor	NRV-Z5	100596		
04	Signal Generator	E4438C	MY49071430	February 01, 2016	One Year
05	Amplifier	60S1G4	0331848	No Calibration Requested	
06	BTS	E5515C	MY50263375	January 30, 2016	One year
07	BTS	CMW500	129942	March 03, 2016	One year
08	E-field Probe	SPEAG EX3DV4	3617	August 26, 2015	One year
09	DAE	SPEAG DAE4	777	August 26, 2015	One year
10	Dipole Validation Kit	SPEAG D750V3	1017	July 23, 2015	One year
11	Dipole Validation Kit	SPEAG D835V2	4d069	July 23, 2015	One year
12	Dipole Validation Kit	SPEAG D1750V2	1003	July 16, 2015	One year
13	Dipole Validation Kit	SPEAG D1900V2	5d101	July 23, 2015	One year
14	Dipole Validation Kit	SPEAG D2450V2	853	July 24, 2015	One year
15	Dipole Validation Kit	SPEAG D2600V2	1012	July 24, 2015	One year
16	Dipole Validation Kit	SPEAG D5GHzV2	1060	July 27, 2015	One year

END OF REPORT BODY

ANNEX A Graph Results

850 Left Cheek Middle

Date: 2016-3-8
Electronics: DAE4 Sn777
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.937 mho/m; εr = 41.122; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3617 ConvF(9.56, 9.56, 9.56)

Area Scan (71x131x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.376 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.447 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.451 W/kg
SAR(1 g) = 0.327 W/kg; SAR(10 g) = 0.251 W/kg
Maximum value of SAR (measured) = 0.363 W/kg

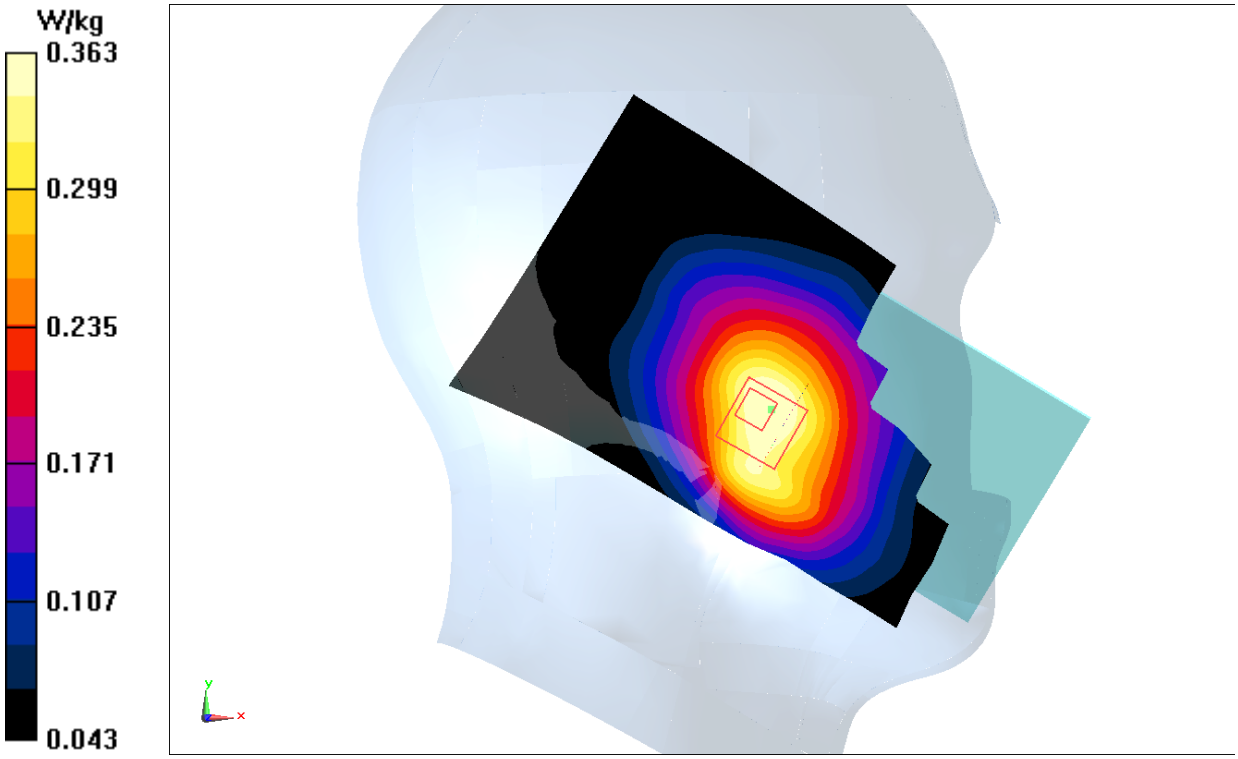


Fig.1 850MHz

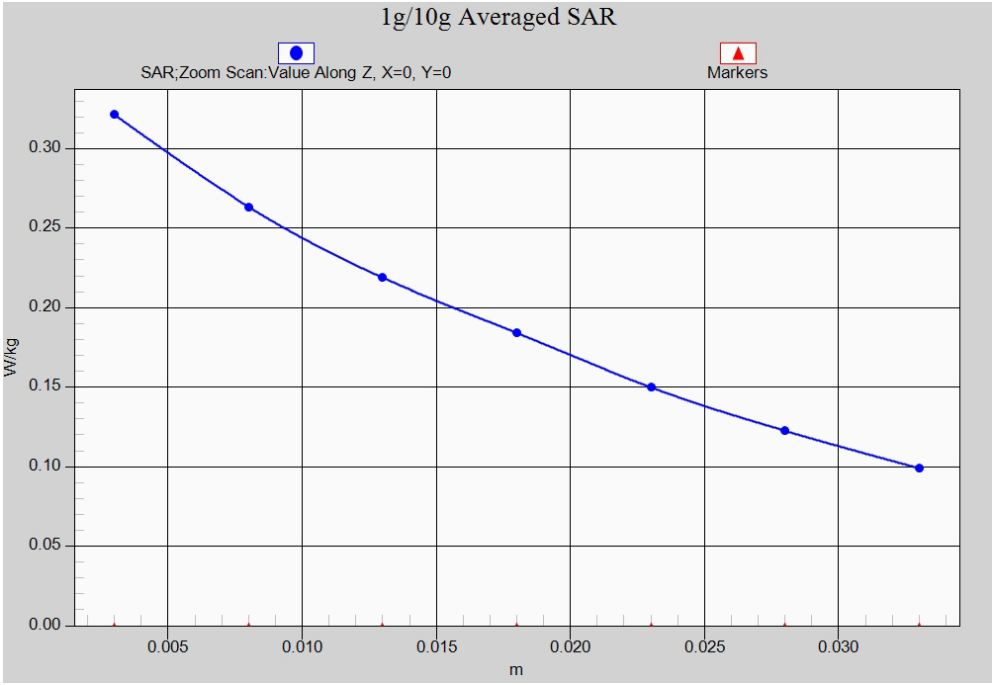


Fig. 1-1 Z-Scan at power reference point (850 MHz)

850 Body Rear Middle

Date: 2016-3-8
Electronics: DAE4 Sn777
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.991 mho/m; εr = 56.233; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3617 ConvF(9.71, 9.71, 9.71)

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.573 W/kg

Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.97 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.827 W/kg
SAR(1 g) = 0.481 W/kg; SAR(10 g) = 0.274 W/kg
Maximum value of SAR (measured) = 0.560 W/kg

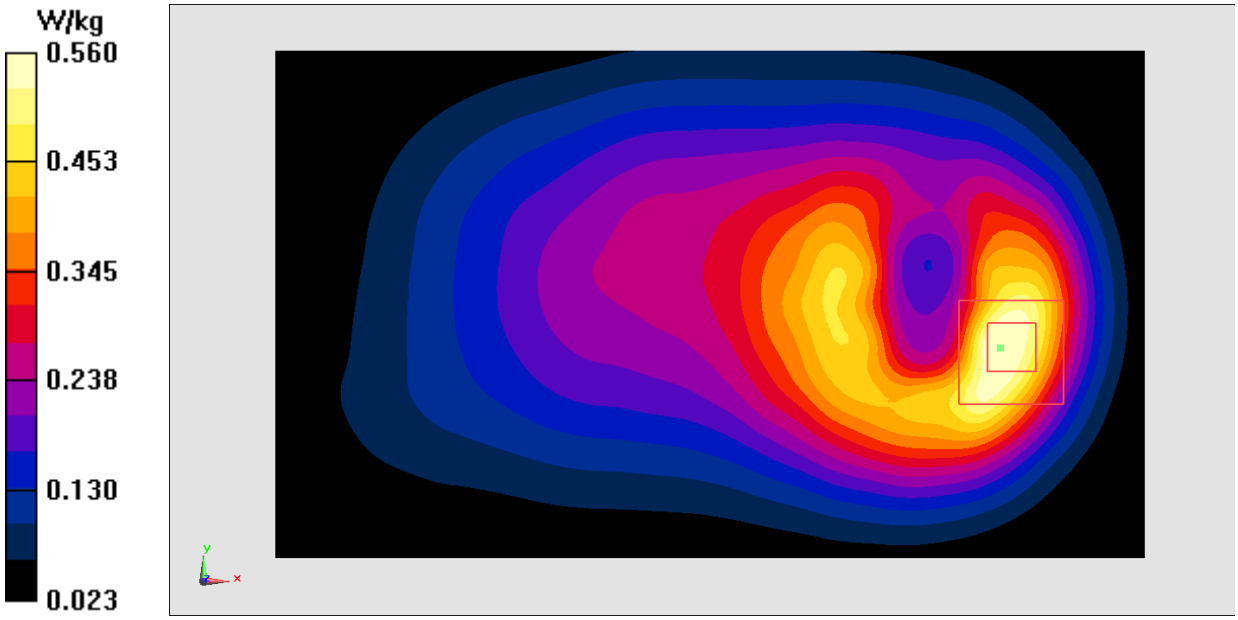


Fig.2 850 MHz

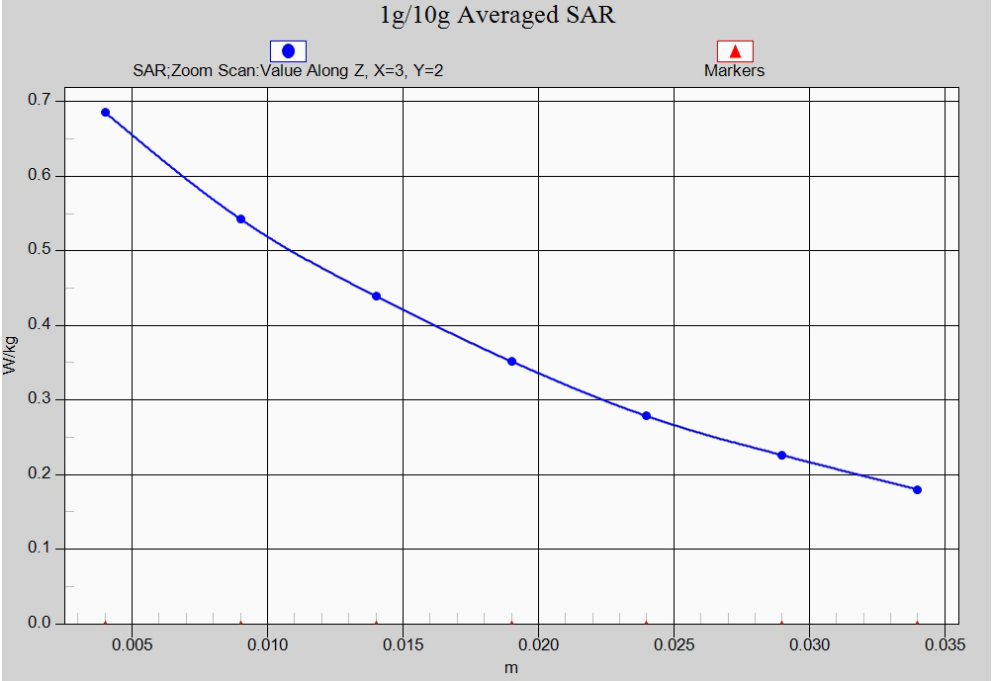


Fig. 2-1 Z-Scan at power reference point (850 MHz)

1900 Right Cheek High
Date: 2016-3-10
Electronics: DAE4 Sn777
Medium: Head 1900 MHz
Medium parameters used: f = 1909.8 MHz; σ = 1.449 mho/m; εr = 39.761; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3617 ConvF(8.07, 8.07, 8.07)

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 = 4.004 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.258 W/kg
SAR(1 g) = 0.168 W/kg; SAR(10 g) = 0.105 W/kg
Maximum value of SAR (measured) = 0.182 W/kg

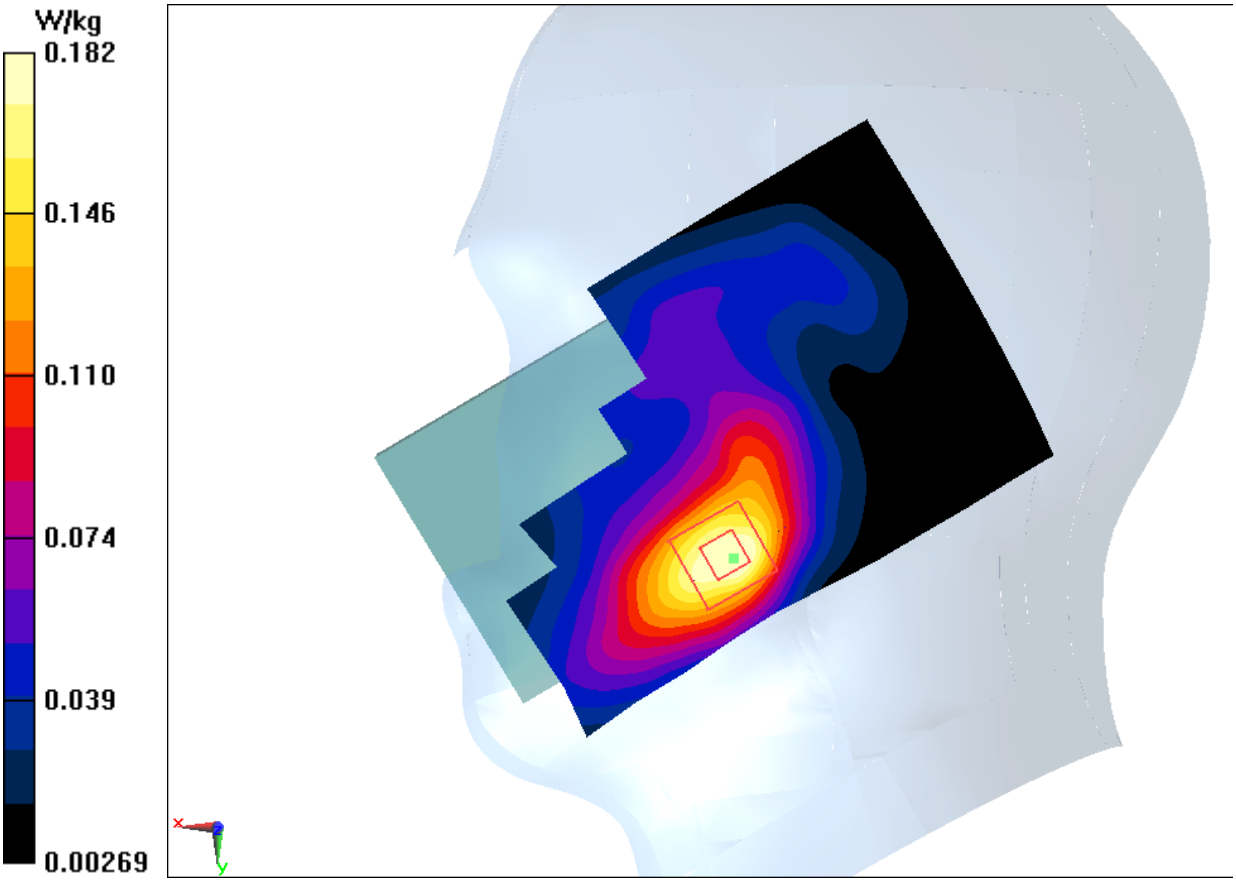


Fig.3 1900 MHz

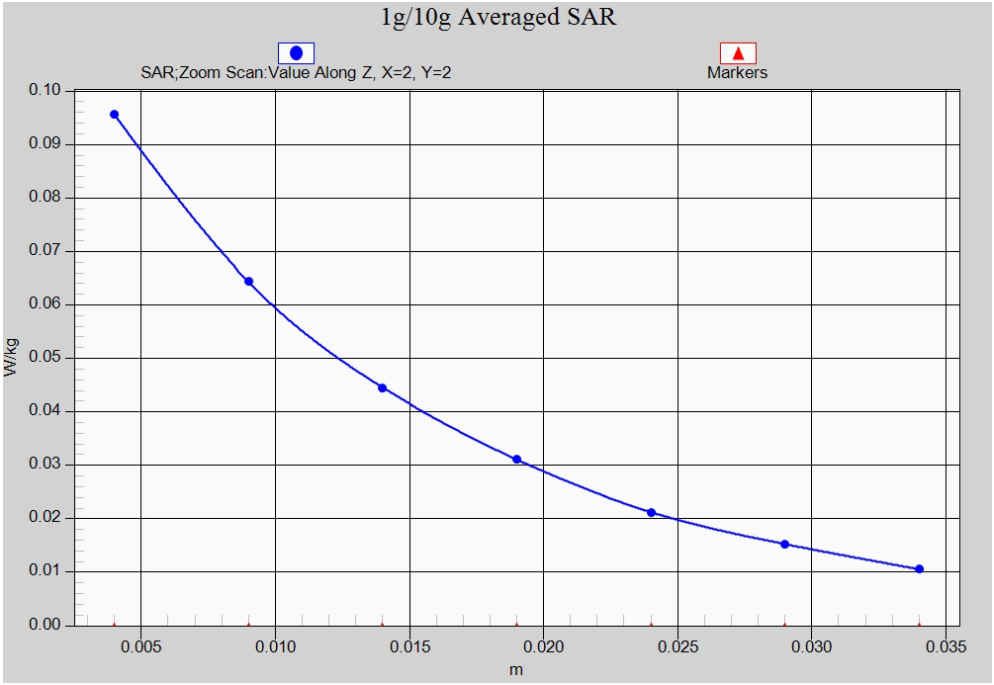


Fig. 3-1 Z-Scan at power reference point (1900 MHz)

1900 Body Rear High
Date: 2016-3-10
Electronics: DAE4 Sn777
Medium: Body 1900 MHz
Medium parameters used: f = 1909.8 MHz; σ = 1.586 mho/m; εr = 54.083; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz GPRS Frequency: 1909.8 MHz Duty Cycle: 1:4
Probe: EX3DV4 - SN3617 ConvF(7.74, 7.74, 7.74)

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.764 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.83 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.05 W/kg
SAR(1 g) = 0.582 W/kg; SAR(10 g) = 0.311 W/kg
Maximum value of SAR (measured) = 0.737 W/kg

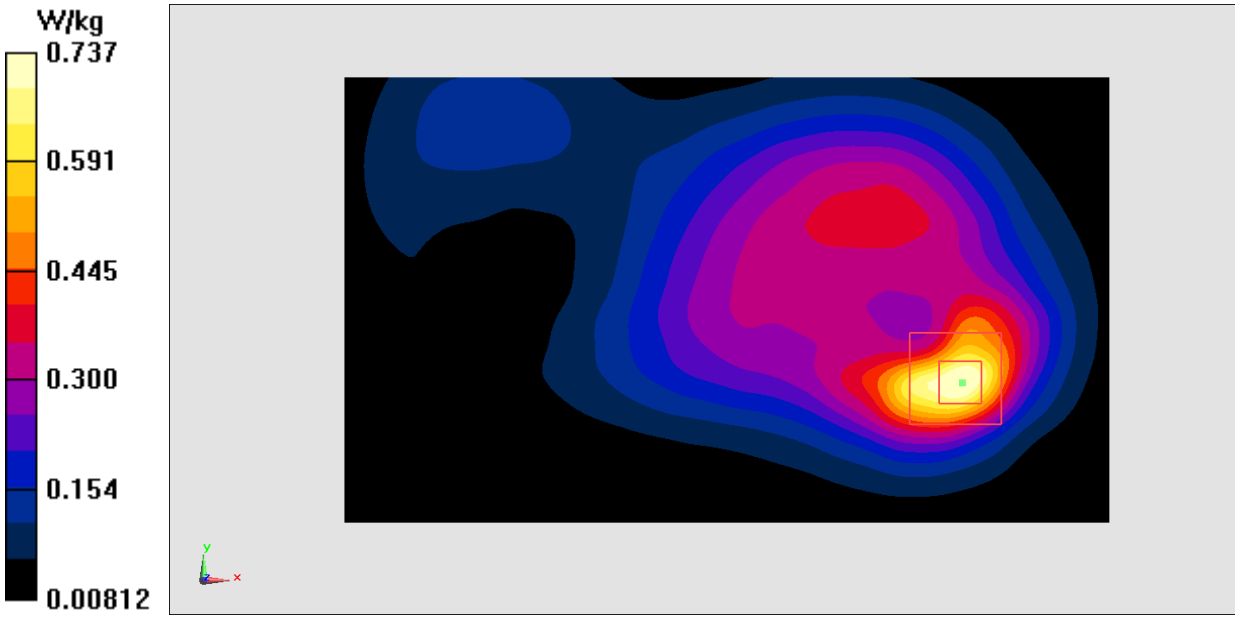


Fig.4 1900 MHz

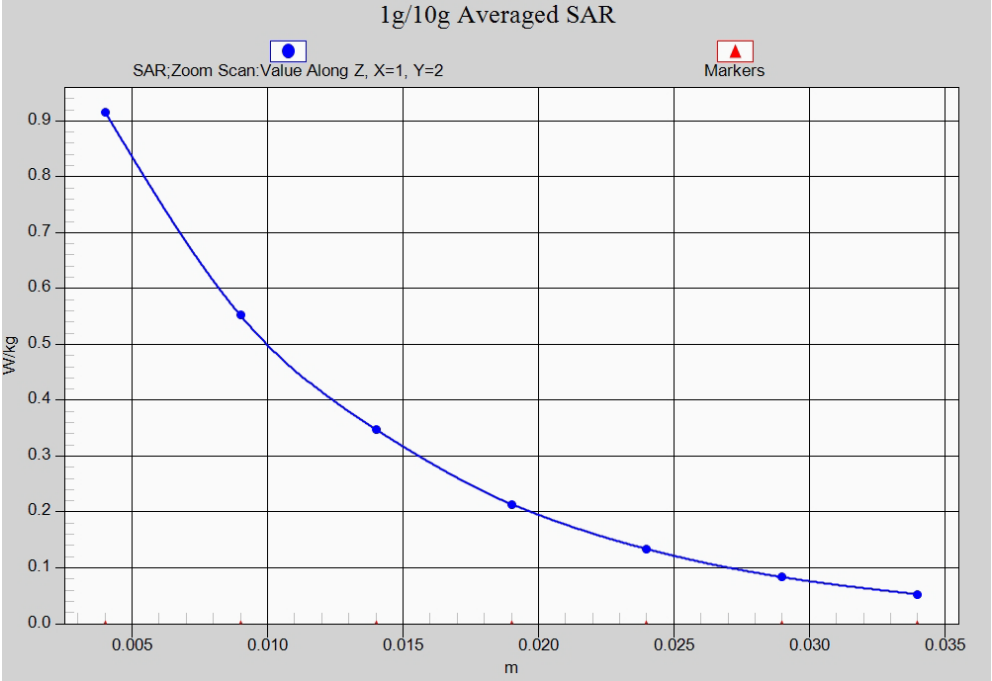


Fig. 4-1 Z-Scan at power reference point (1900 MHz)

WCDMA 850 Left Cheek High

Date: 2016-3-8
Electronics: DAE4 Sn777
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.948 mho/m; εr = 41.089; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(9.56, 9.56, 9.56)

Area Scan (71x131x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.331 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.082 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 0.423 W/kg
SAR(1 g) = 0.304 W/kg; SAR(10 g) = 0.232 W/kg
Maximum value of SAR (measured) = 0.339 W/kg

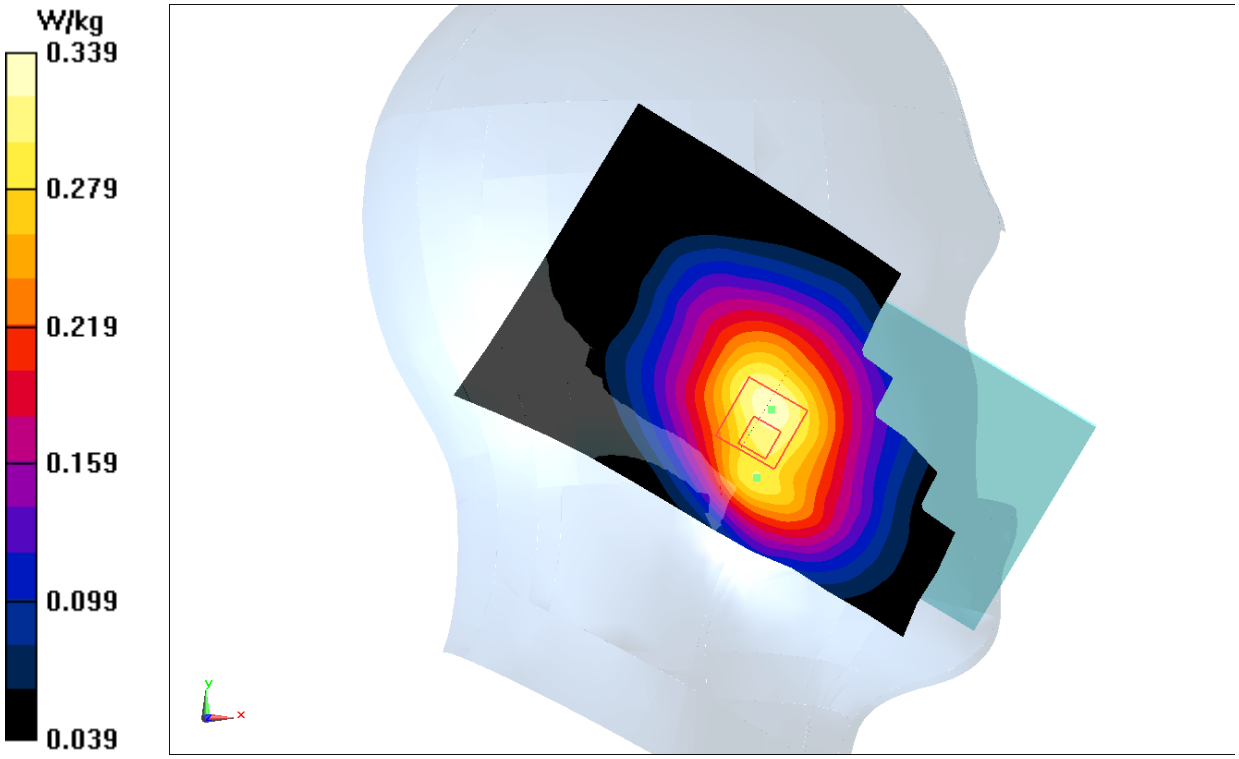


Fig.5 WCDMA 850

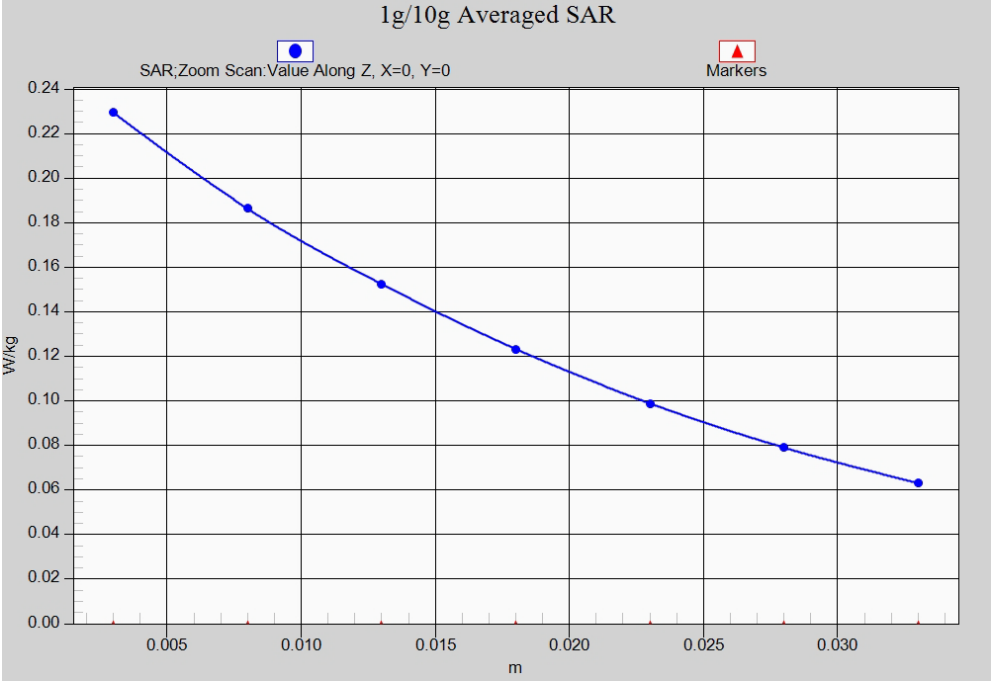


Fig. 5-1 Z-Scan at power reference point (1900 MHz)

WCDMA 850 Body Rear Middle

Date: 2016-3-8
Electronics: DAE4 Sn777
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.987 mho/m; εr = 56.275; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: WCDMA; Frequency: 836.4 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(9.71, 9.71, 9.71)

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.381 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.88 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.600 W/kg
SAR(1 g) = 0.352 W/kg; SAR(10 g) = 0.204 W/kg
Maximum value of SAR (measured) = 0.411 W/kg

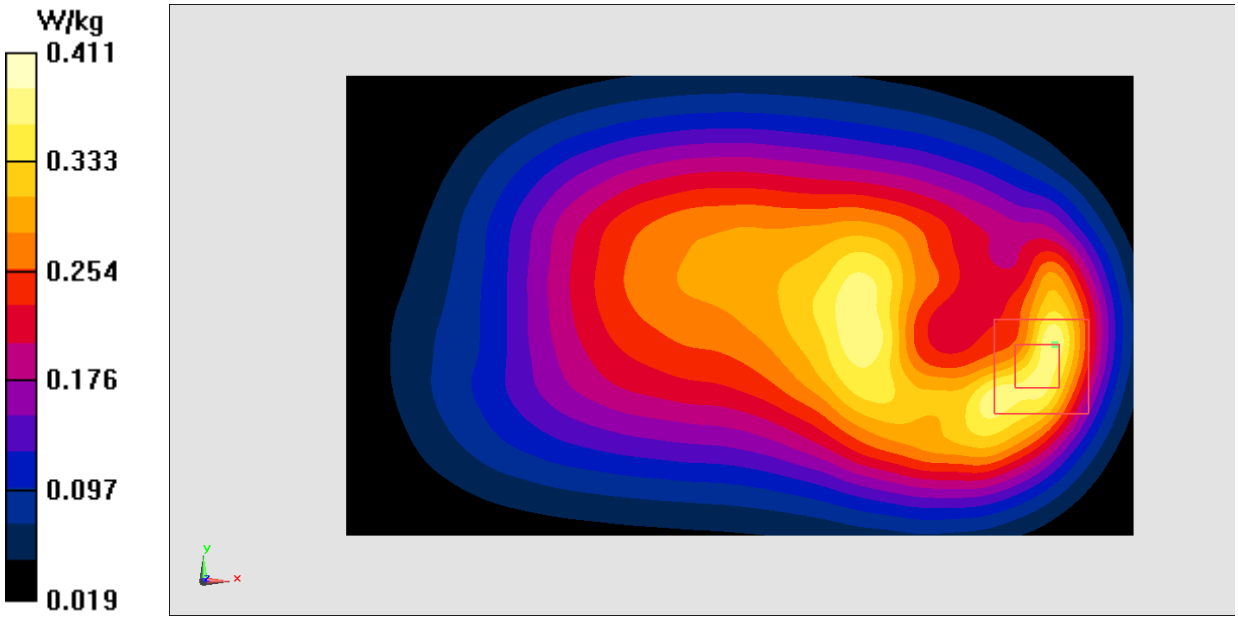


Fig.6 WCDMA 850

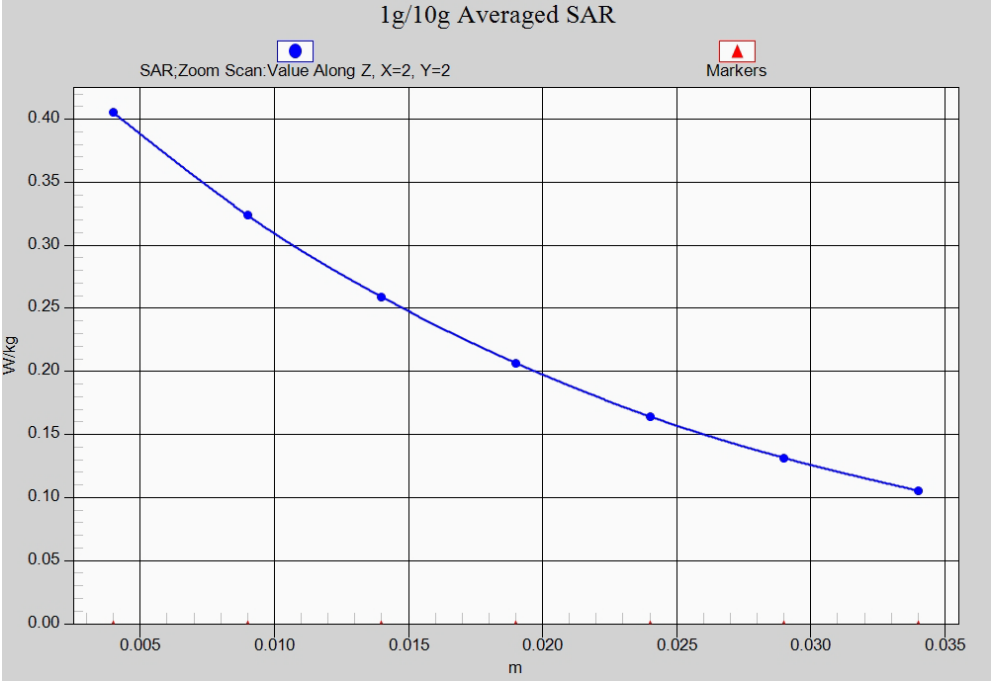


Fig. 6-1 Z-Scan at power reference point (WCDMA850)

WCDMA 1900 Right Cheek Low

Date: 2016-3-10
Electronics: DAE4 Sn777
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.423 mho/m; εr = 39.976; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: WCDMA 1900 Frequency: 1852.4 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(8.07, 8.07, 8.07)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.527 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.047 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.714 W/kg
SAR(1 g) = 0.464 W/kg; SAR(10 g) = 0.293 W/kg
Maximum value of SAR (measured) = 0.500 W/kg

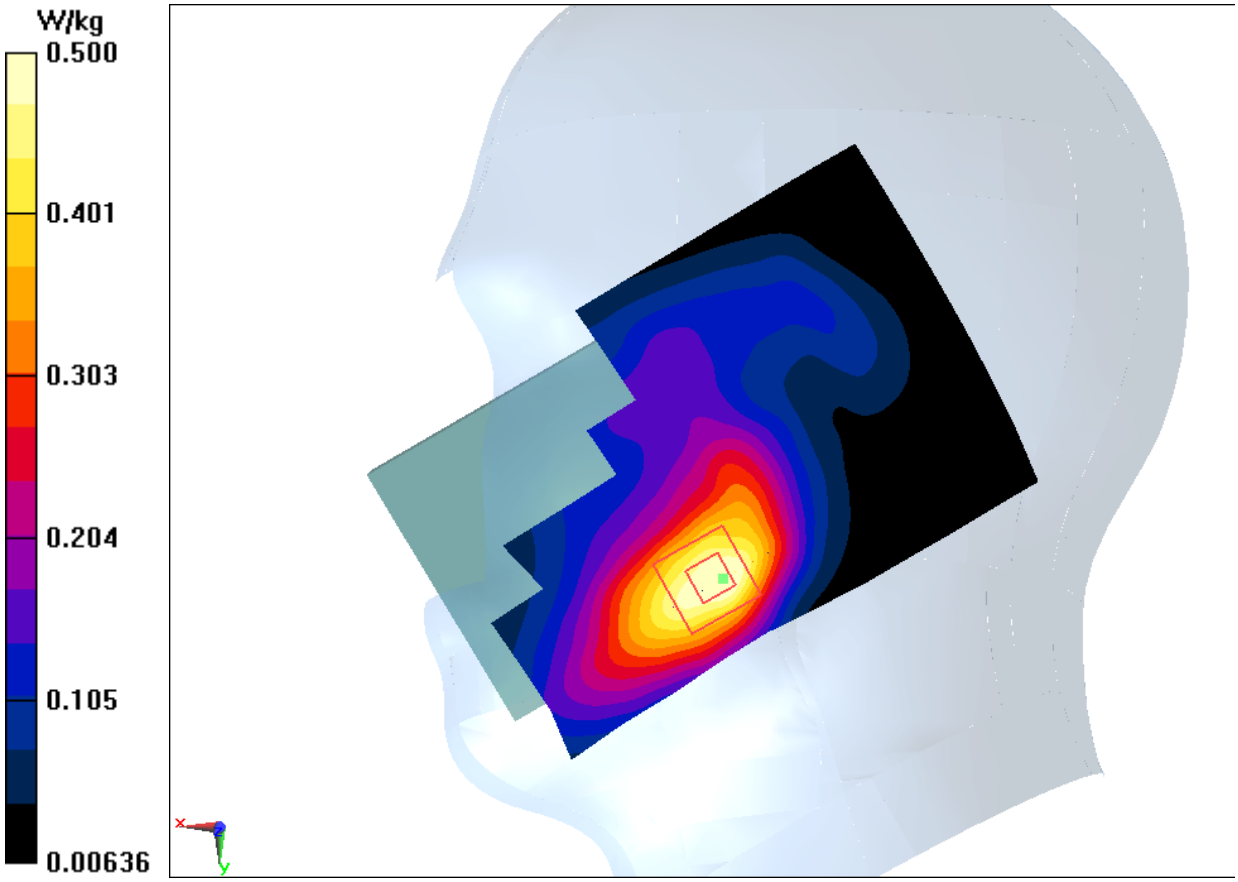


Fig.7 WCDMA1900

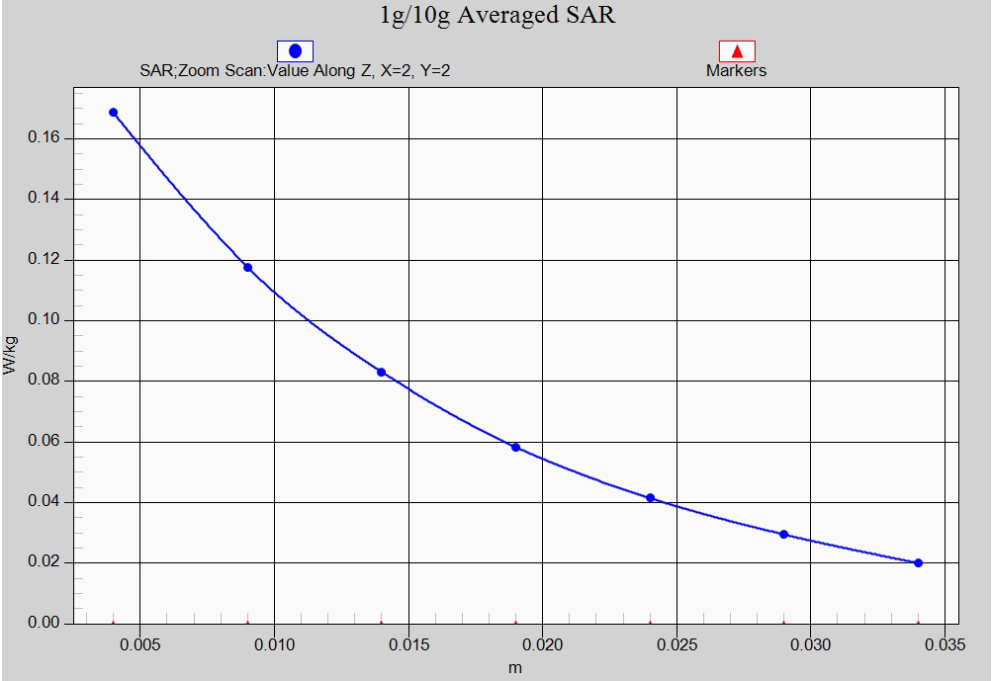


Fig. 7-1 Z-Scan at power reference point (WCDMA850)

WCDMA 1900 Body Rear Middle
Date: 2016-3-10
Electronics: DAE4 Sn777
Medium: Body 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.567 mho/m; εr = 54.355; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: WCDMA 1900 Frequency: 1880 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(7.74, 7.74, 7.74)

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.18 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.67 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.54 W/kg
SAR(1 g) = 0.856 W/kg; SAR(10 g) = 0.457 W/kg
Maximum value of SAR (measured) = 1.19 W/kg

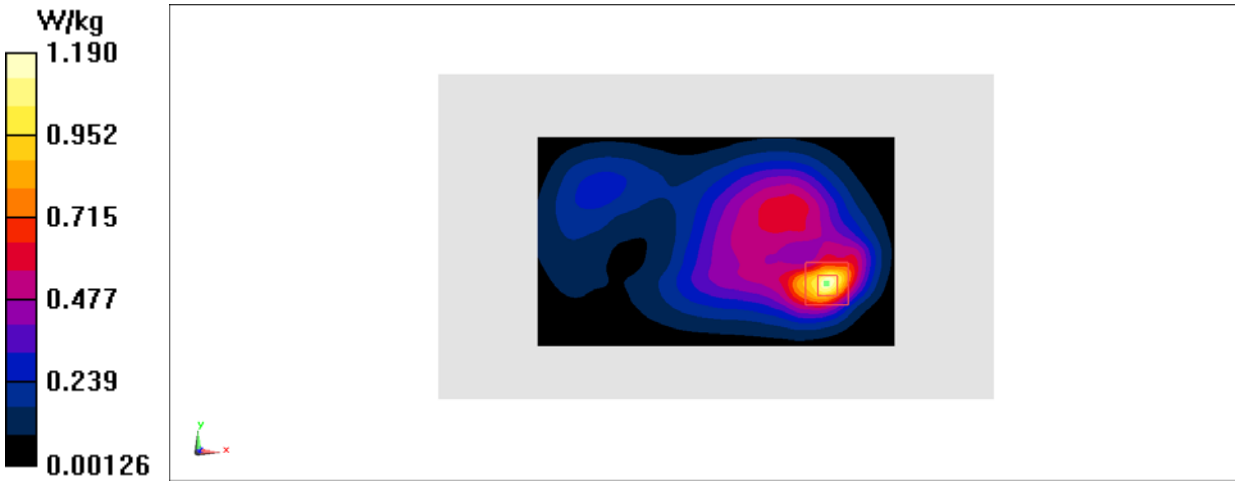


Fig.8 WCDMA1900

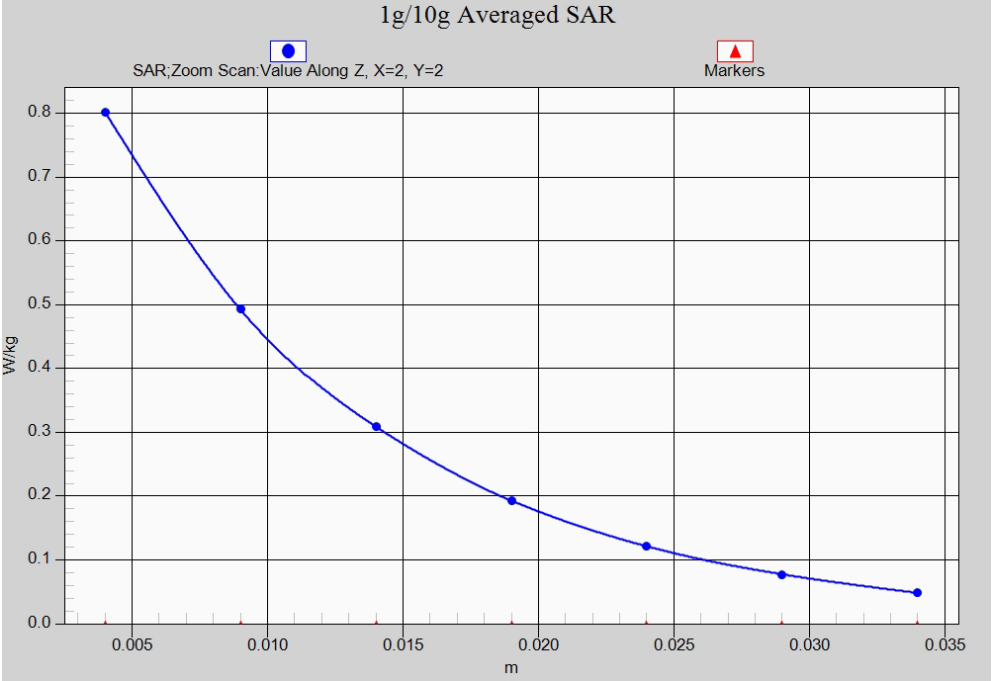


Fig. 8-1 Z-Scan at power reference point (WCDMA1900)

LTE Band2 Right Cheek High with QPSK_20M_1RB_Middle

Date: 2016-3-10
Electronics: DAE4 Sn777
Medium: Head 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.436 mho/m; εr = 39.88; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band2 Frequency: 1900 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(8.07, 8.07, 8.07)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.369 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.954 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.512 W/kg
SAR(1 g) = 0.325 W/kg; SAR(10 g) = 0.200 W/kg
Maximum value of SAR (measured) = 0.348 W/kg

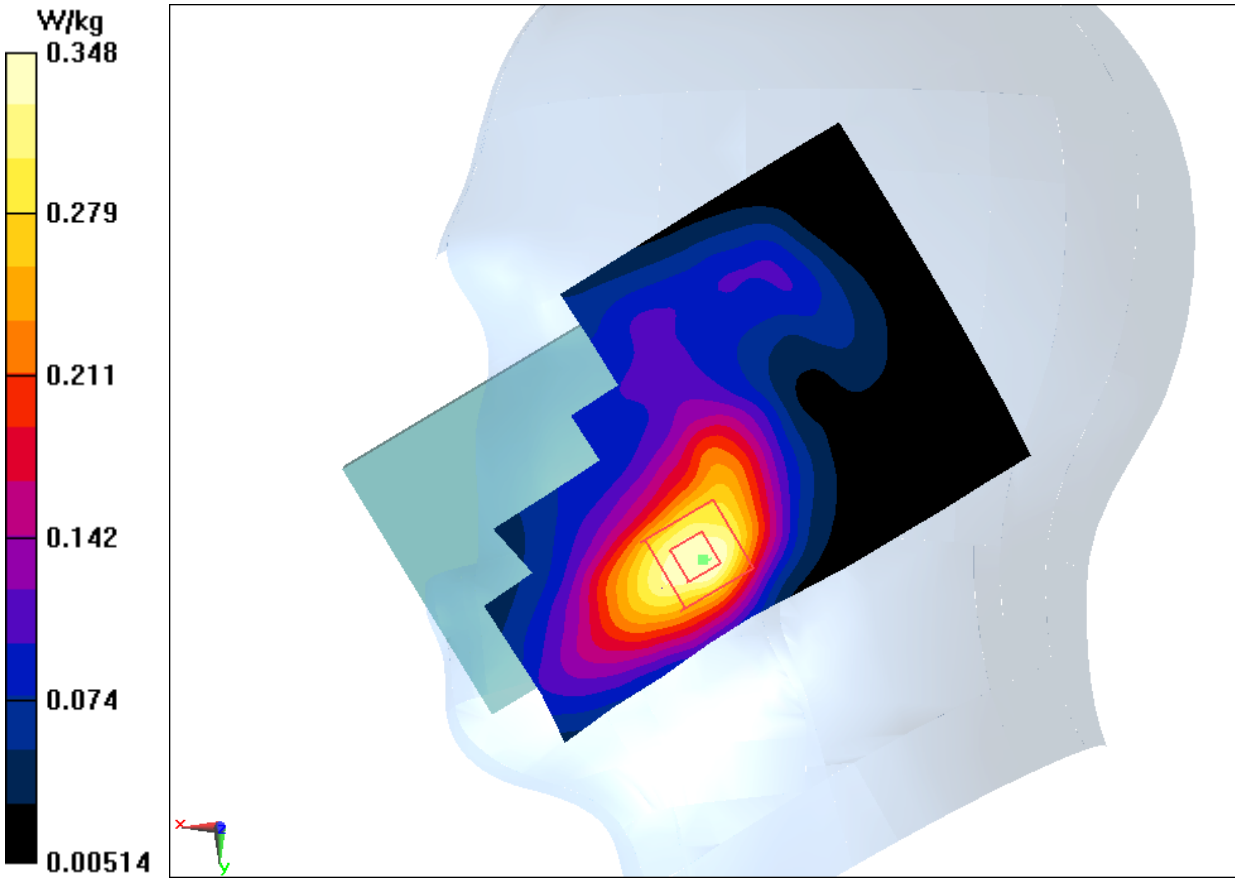


Fig.9 LTE Band2

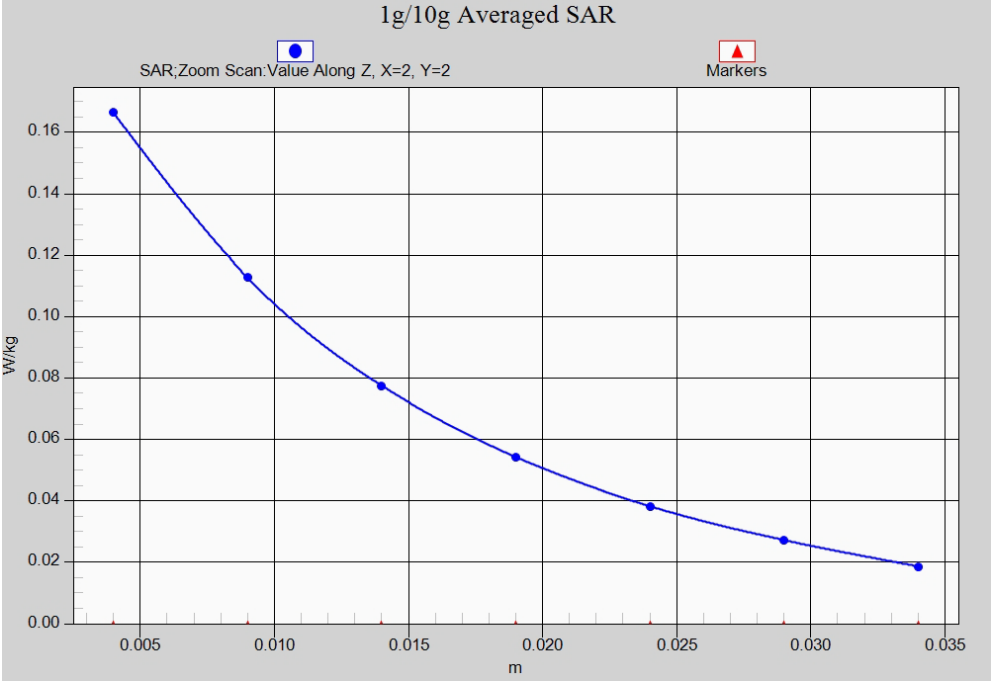


Fig. 9-1 Z-Scan at power reference point (LTE Band2)

LTE Band2 Body Rear High with QPSK_20M_1RB_Middle

Date: 2016-3-10
Electronics: DAE4 Sn777
Medium: Body 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.573 mho/m; εr = 54.15; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band4 Frequency: 1900 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(7.74, 7.74, 7.74)

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.814 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.81 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 1.15 W/kg
SAR(1 g) = 0.641 W/kg; SAR(10 g) = 0.350 W/kg
Maximum value of SAR (measured) = 0.775 W/kg

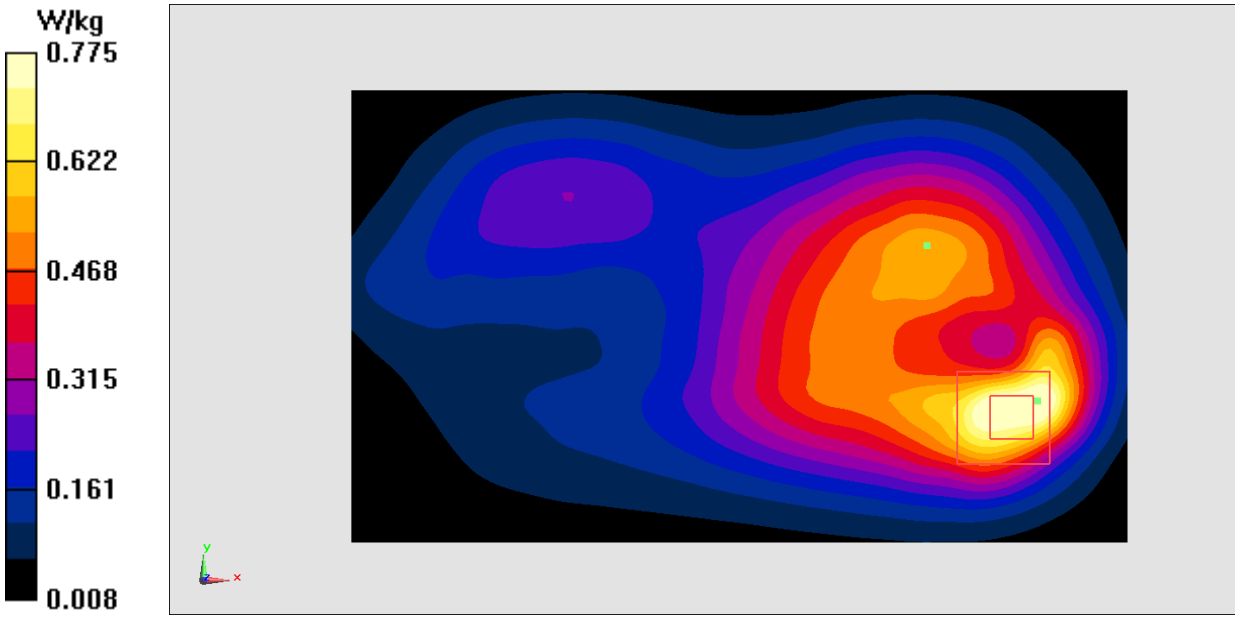


Fig.10 LTE Band2

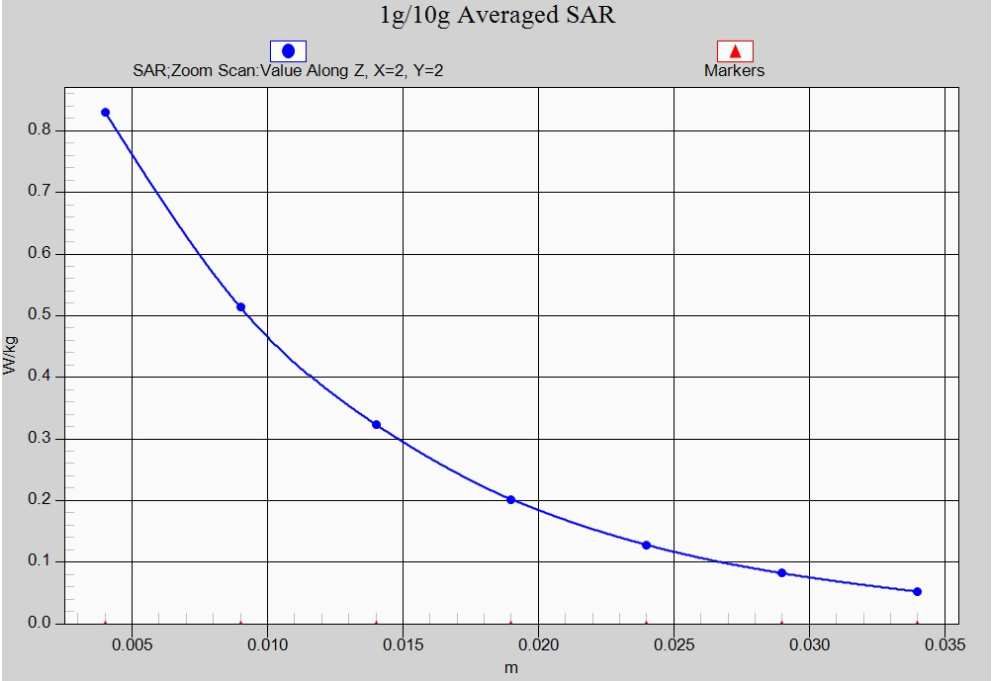


Fig. 10-1 Z-Scan at power reference point (LTE Band2)

LTE Band4 Right Cheek Low with QPSK_20M_1RB_Middle
Date: 2016-3-9
Electronics: DAE4 Sn777
Medium: Head 1750 MHz
Medium parameters used: f = 1720 MHz; σ = 1.341 mho/m; εr = 39.78; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band4 Frequency: 1720 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(8.34, 8.34, 8.34)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.272 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.510 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.376 W/kg
SAR(1 g) = 0.248 W/kg; SAR(10 g) = 0.161 W/kg
Maximum value of SAR (measured) = 0.266 W/kg

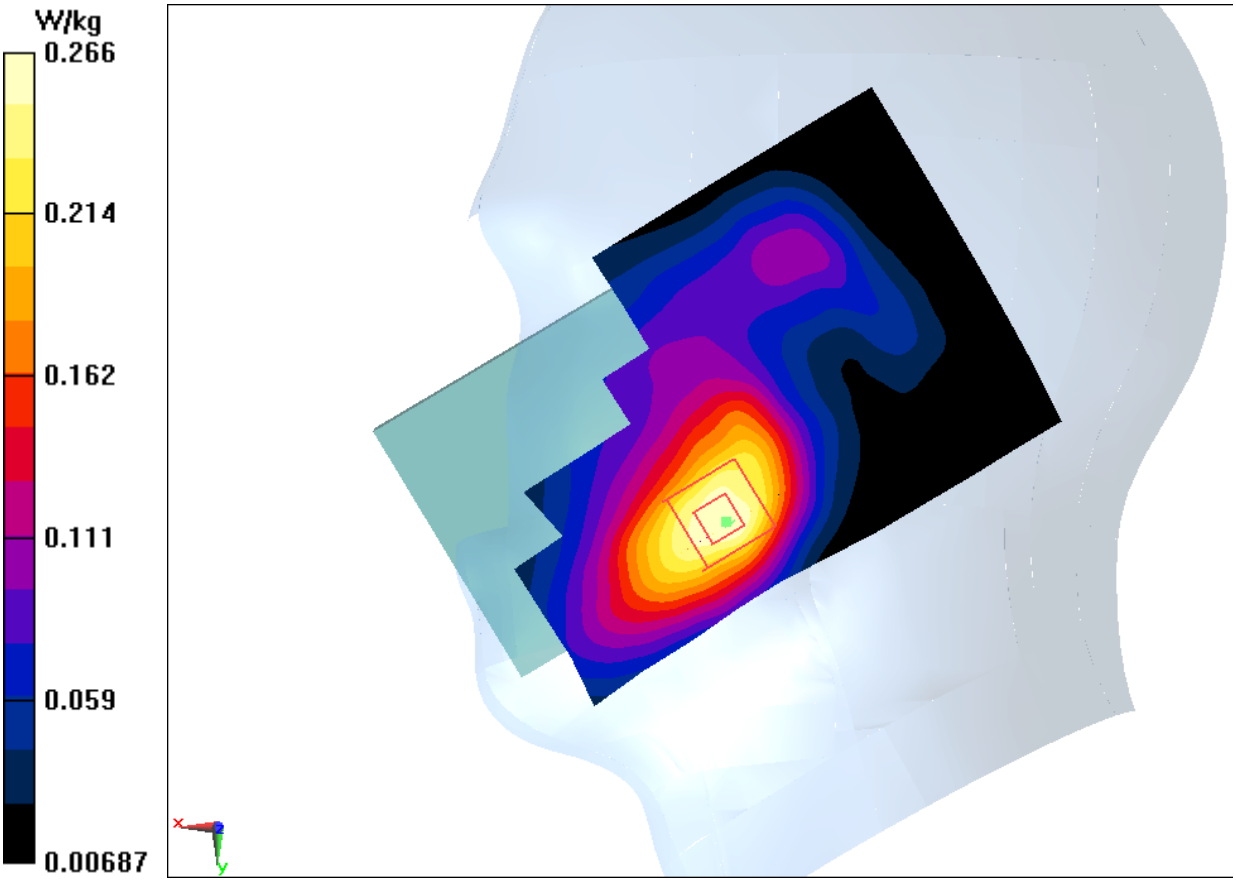


Fig.11 LTE Band4

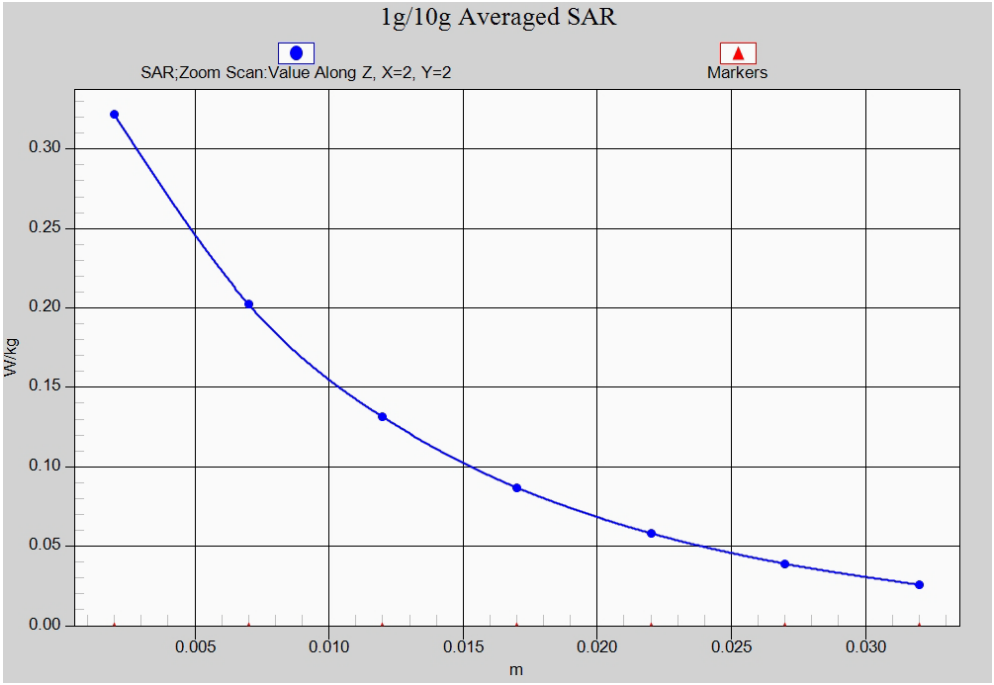


Fig. 11-1 Z-Scan at power reference point (LTE Band4)

LTE Band4 Body Rear Low with QPSK_20M_1RB_Middle
Date: 2016-3-9
Electronics: DAE4 Sn777
Medium: Body 1750 MHz
Medium parameters used: f = 1720 MHz; σ = 1.468 mho/m; εr = 52.863; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band4 Frequency: 1720 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(7.96, 7.96, 7.96)

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.473 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.17 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.587 W/kg
SAR(1 g) = 0.409 W/kg; SAR(10 g) = 0.277 W/kg
Maximum value of SAR (measured) = 0.468 W/kg

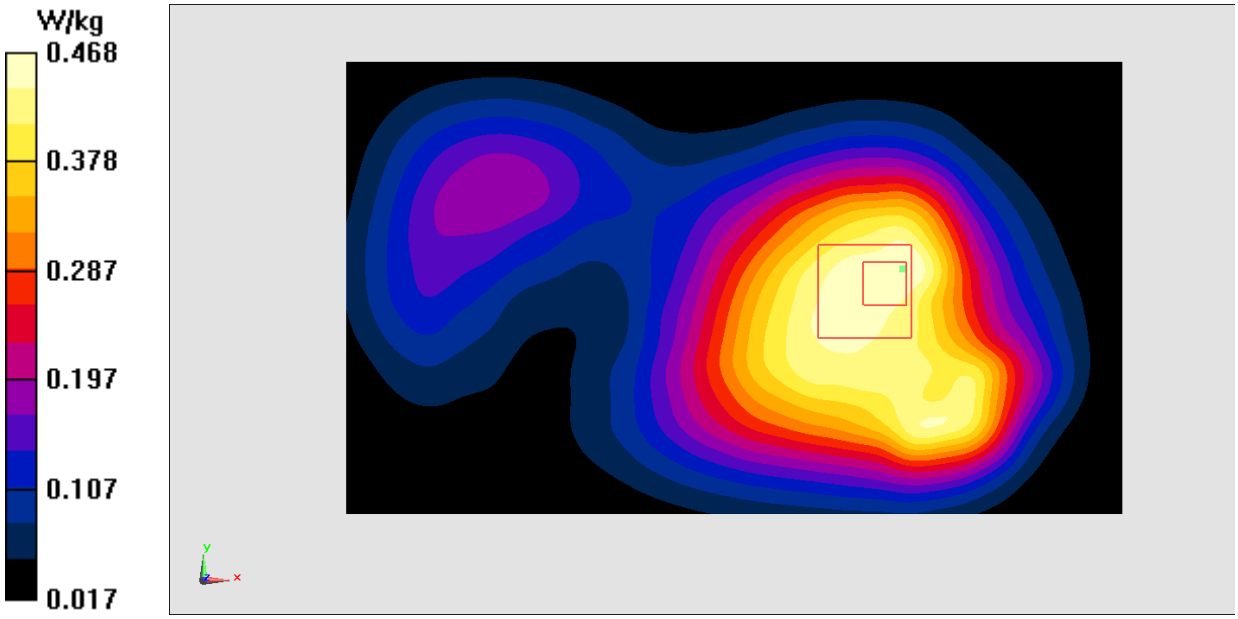


Fig.12 LTE Band4

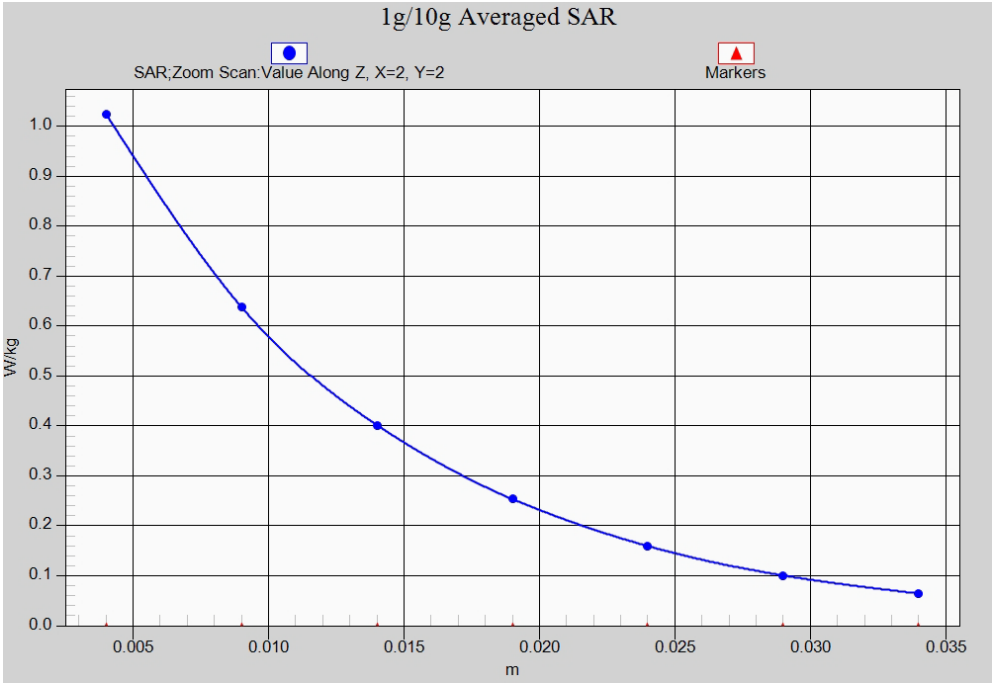


Fig. 12-1 Z-Scan at power reference point (LTE Band4)

LTE Band7 Right Cheek Low with QPSK_20M_1RB_Middle
Date: 2016-3-12
Electronics: DAE4 Sn777
Medium: Head 2600 MHz
Medium parameters used: f = 2510 MHz; σ = 1.949 mho/m; εr = 38.112; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band7 Frequency: 2510 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(7.21, 7.21, 7.21)

Area Scan (91x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.292 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.654 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.476 W/kg
SAR(1 g) = 0.253 W/kg; SAR(10 g) = 0.140 W/kg
Maximum value of SAR (measured) = 0.276 W/kg

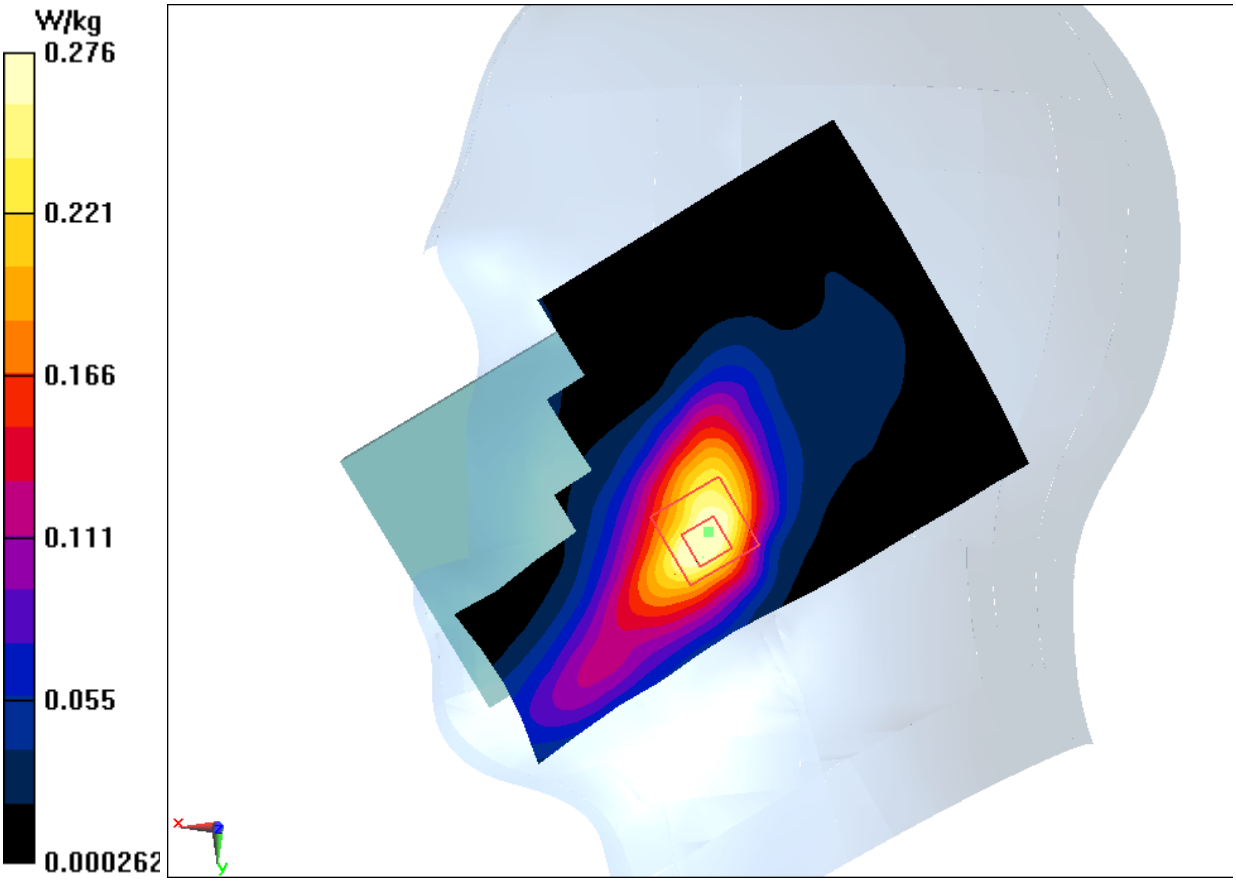


Fig.13 LTE Band7

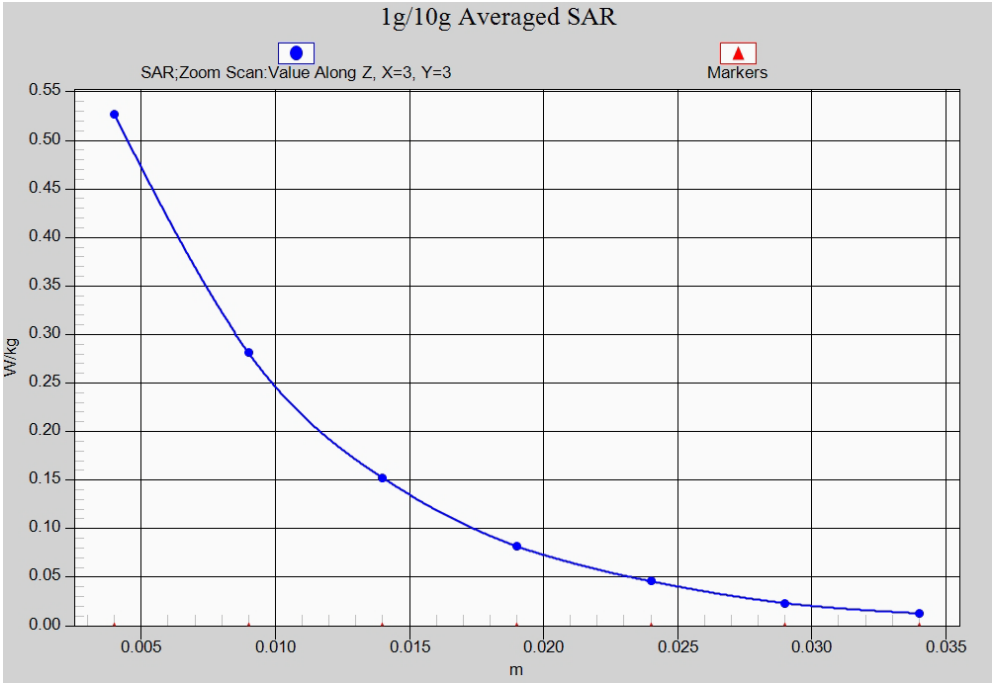


Fig. 13-1 Z-Scan at power reference point (LTE Band7)

LTE Band7 Body Rear Low with QPSK_20M_1RB_Middle
Date: 2016-3-12
Electronics: DAE4 Sn777
Medium: Body 2600 MHz
Medium parameters used: f = 2510 MHz; σ = 2.103 mho/m; εr = 51.369; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band7 Frequency: 2510 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(7.20, 7.20, 7.20)

Area Scan (151x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.861 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.861 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 1.13 W/kg
SAR(1 g) = 0.585 W/kg; SAR(10 g) = 0.288 W/kg
Maximum value of SAR (measured) = 0.749 W/kg

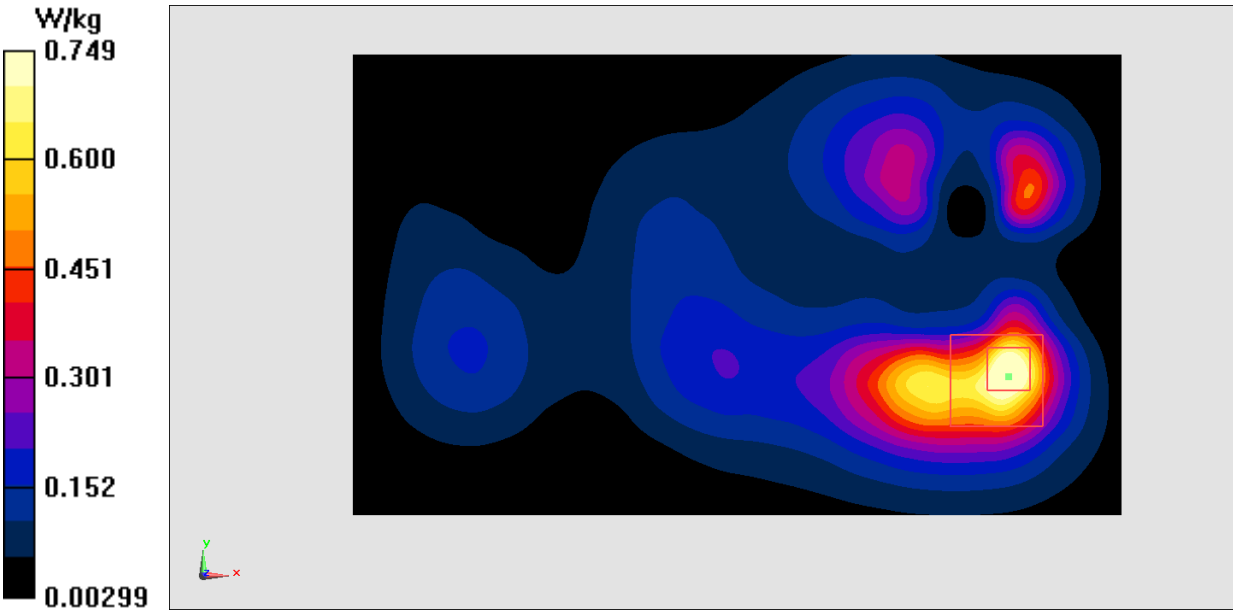


Fig.14 LTE Band7

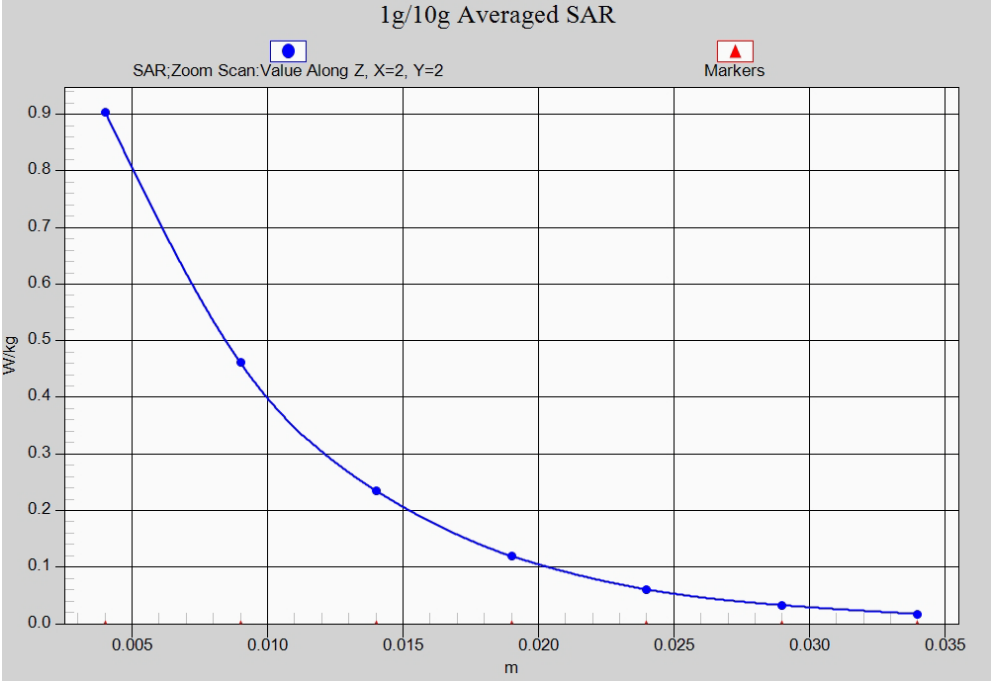


Fig. 14-1 Z-Scan at power reference point (LTE Band7)

LTE Band 13 Left Cheek Middle with QPSK_10M_1RB_Middle
Date: 2016-3-7
Electronics: DAE4 Sn777
Medium: Head 750 MHz
Medium parameters used (interpolated): f = 782 MHz; σ = 0.928 mho/m; εr = 42.991; ρ = 1000 kg/m^3
Ambient Temperature: 22.2°C Liquid Temperature: 21.7°C
Communication System: LTE Band13 Frequency: 782 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(9.98, 9.98, 9.98)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.206 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.942 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.239 W/kg
SAR(1 g) = 0.191 W/kg; SAR(10 g) = 0.150 W/kg
Maximum value of SAR (measured) = 0.207 W/kg

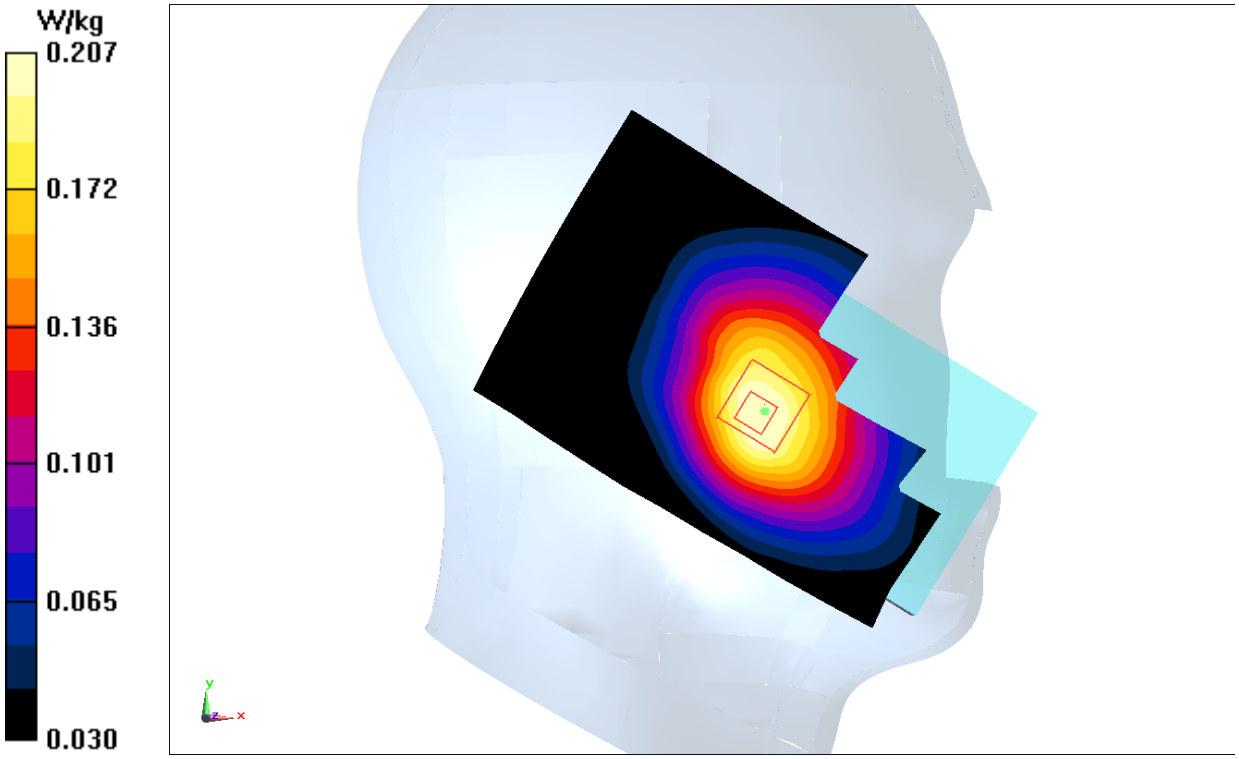


Fig.15 LTE Band 13

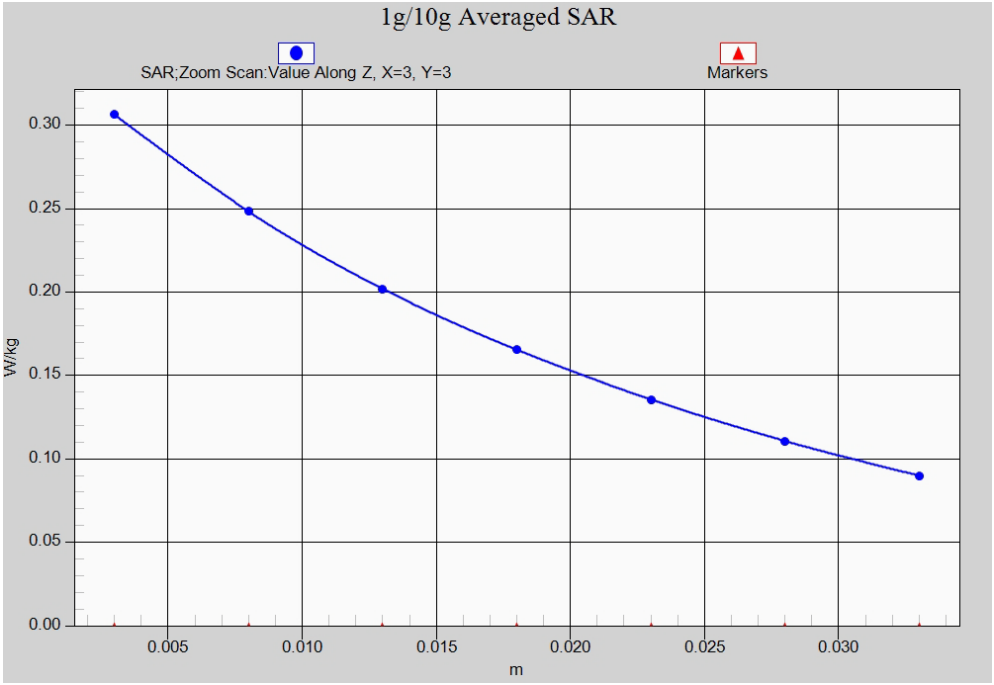


Fig. 15-1 Z-Scan at power reference point (LTE Band13)

LTE Band 13 Body Rear Middle with QPSK_10M_1RB_Middle
Date: 2016-3-7
Electronics: DAE4 Sn777
Medium: Body 750 MHz
Medium parameters used (interpolated): f = 782 MHz; σ = 0.958 mho/m; εr = 56.861; ρ = 1000 kg/m^3
Ambient Temperature: 22.2°C Liquid Temperature: 21.7°C
Communication System: LTE Band13 Frequency: 782 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(9.76, 9.76, 9.76)

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.465 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.86 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 0.557 W/kg
SAR(1 g) = 0.423 W/kg; SAR(10 g) = 0.319 W/kg
Maximum value of SAR (measured) = 0.464 W/kg

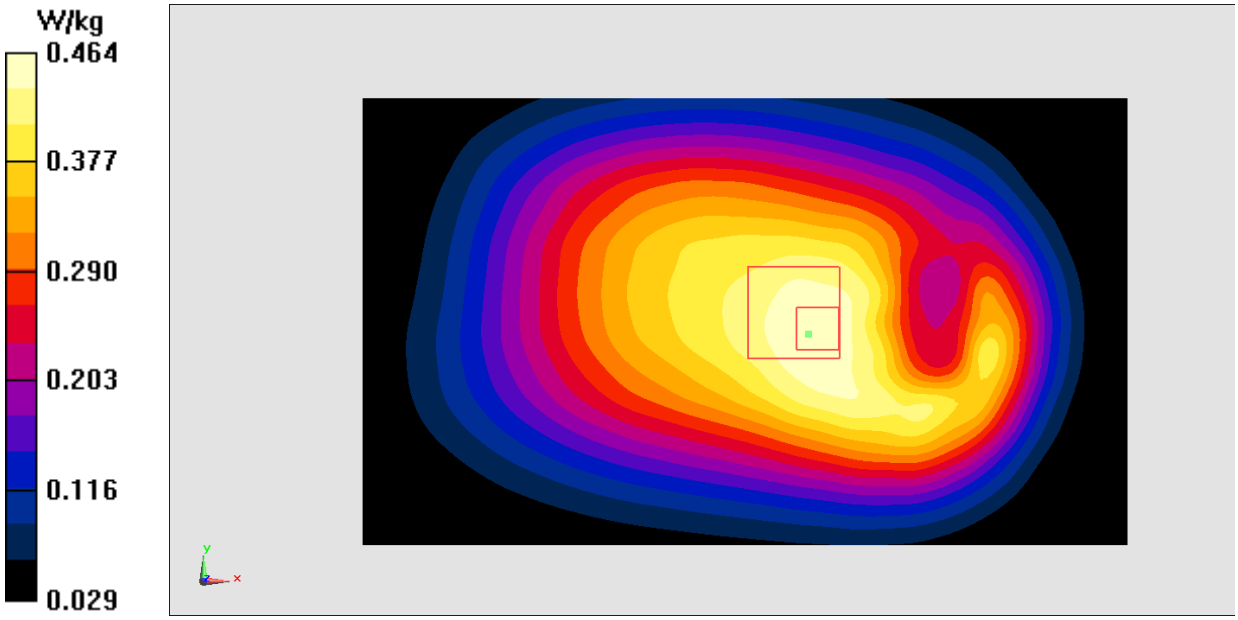


Fig.16 LTE Band 13

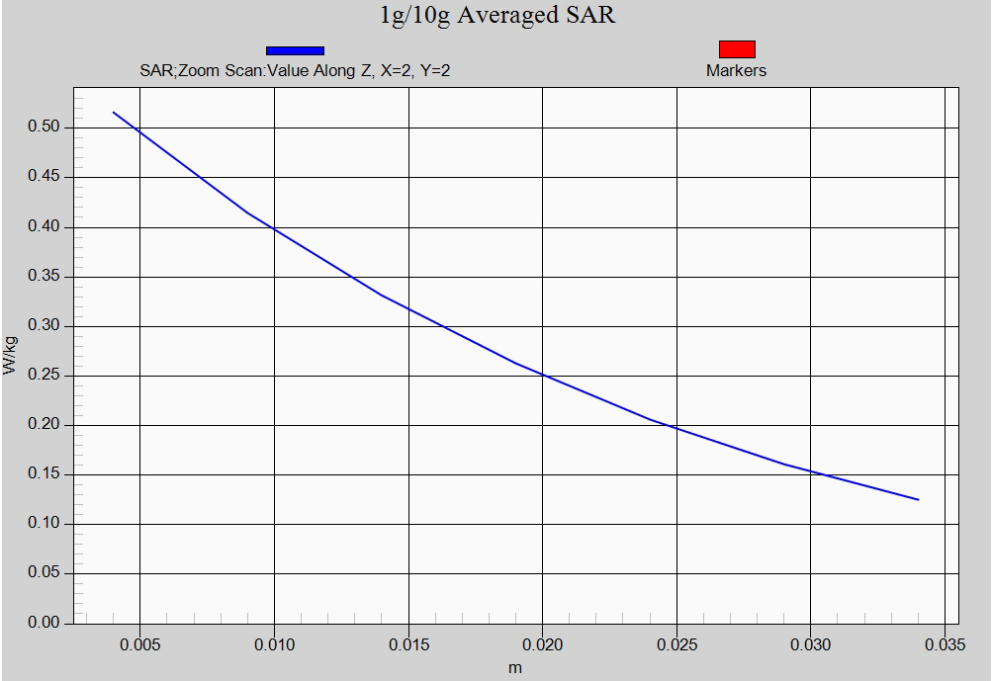


Fig.16-1 Z-Scan at power reference point (LTE Band13)

LTE Band17 Left Cheek Middle with QPSK_10M_1RB_Middle

Date: 2016-3-7
Electronics: DAE4 Sn777
Medium: Head 750 MHz
Medium parameters used (interpolated): f = 710 MHz; σ = 0.922 mho/m; εr = 43.214; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band17 Frequency: 710 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(9.98, 9.98, 9.98)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.0613 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.068 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.0710 W/kg
SAR(1 g) = 0.058 W/kg; SAR(10 g) = 0.046 W/kg
Maximum value of SAR (measured) = 0.0618 W/kg

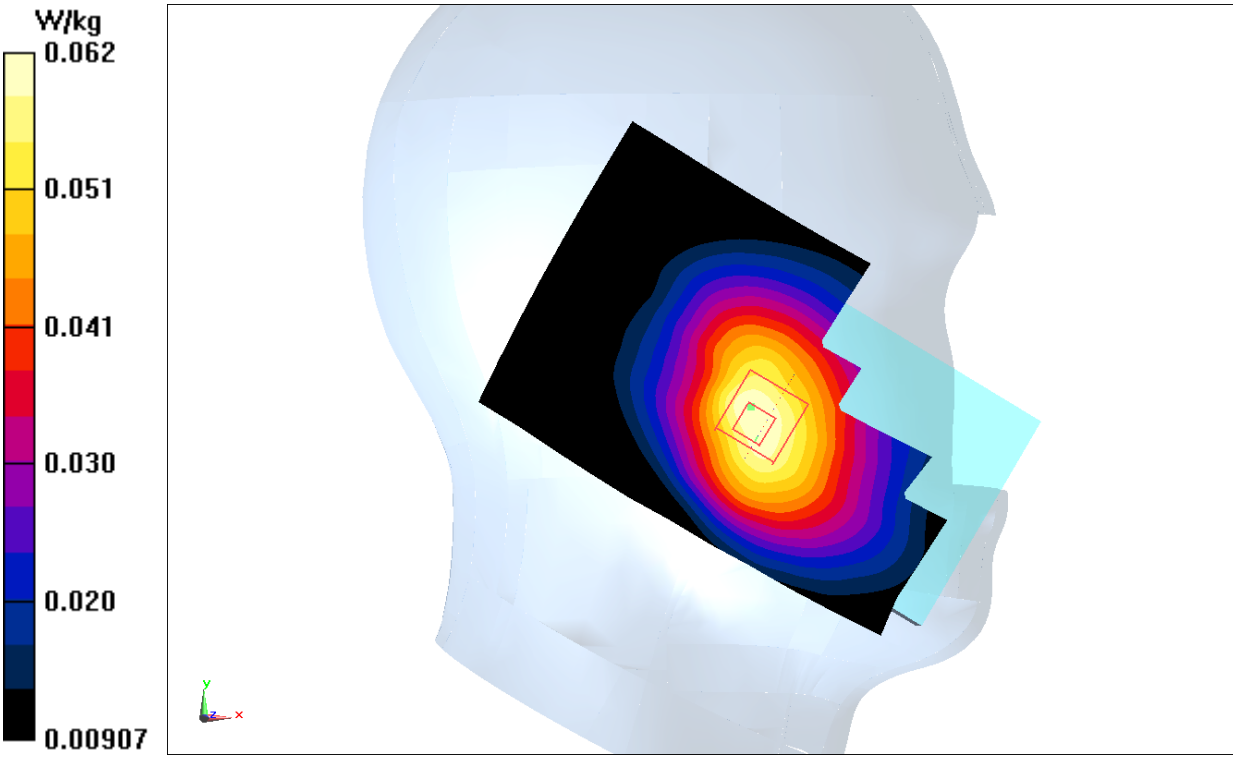


Fig.17 LTE Band17

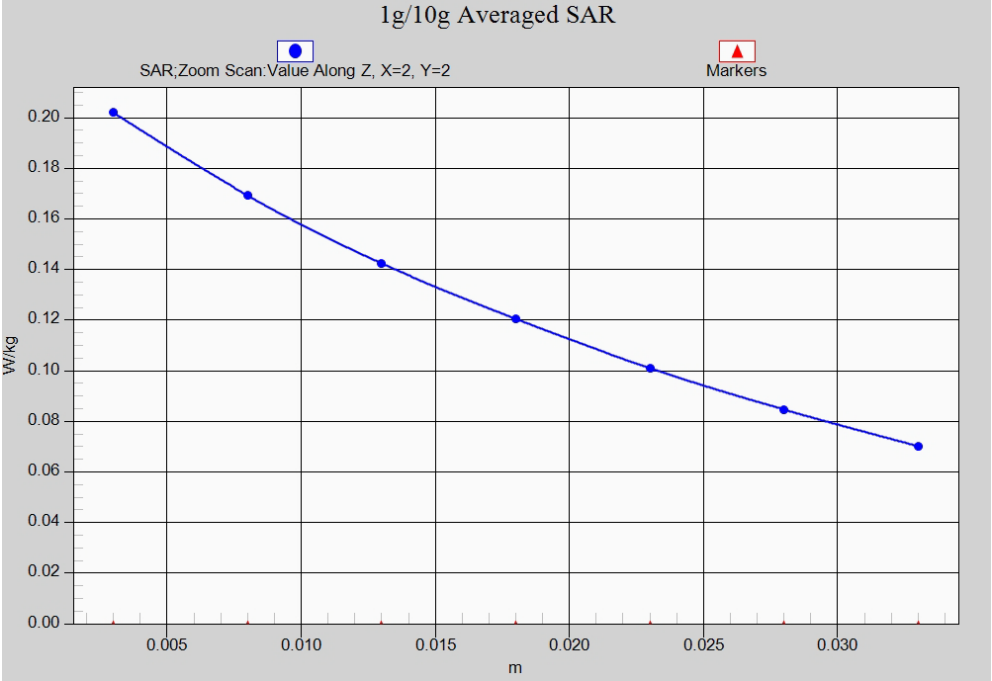


Fig. 17-1 Z-Scan at power reference point (LTE Band17)

LTE Band17 Body Rear Middle with QPSK_10M_1RB_Middle

Date: 2016-3-7
Electronics: DAE4 Sn777
Medium: Body 750 MHz
Medium parameters used (interpolated): f = 710 MHz; σ = 0.932 mho/m; εr = 57.022; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band17 Frequency: 710 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(9.76, 9.76, 9.76)

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.241 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.67 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.273 W/kg
SAR(1 g) = 0.222 W/kg; SAR(10 g) = 0.175 W/kg
Maximum value of SAR (measured) = 0.240 W/kg

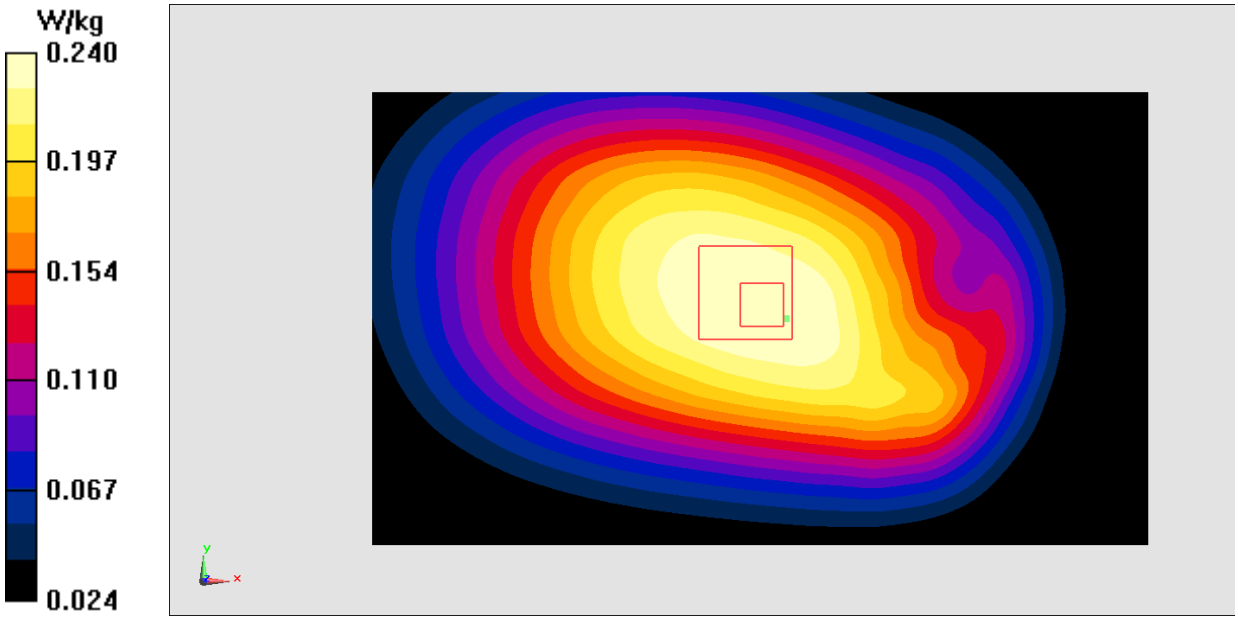


Fig.18 LTE Band17

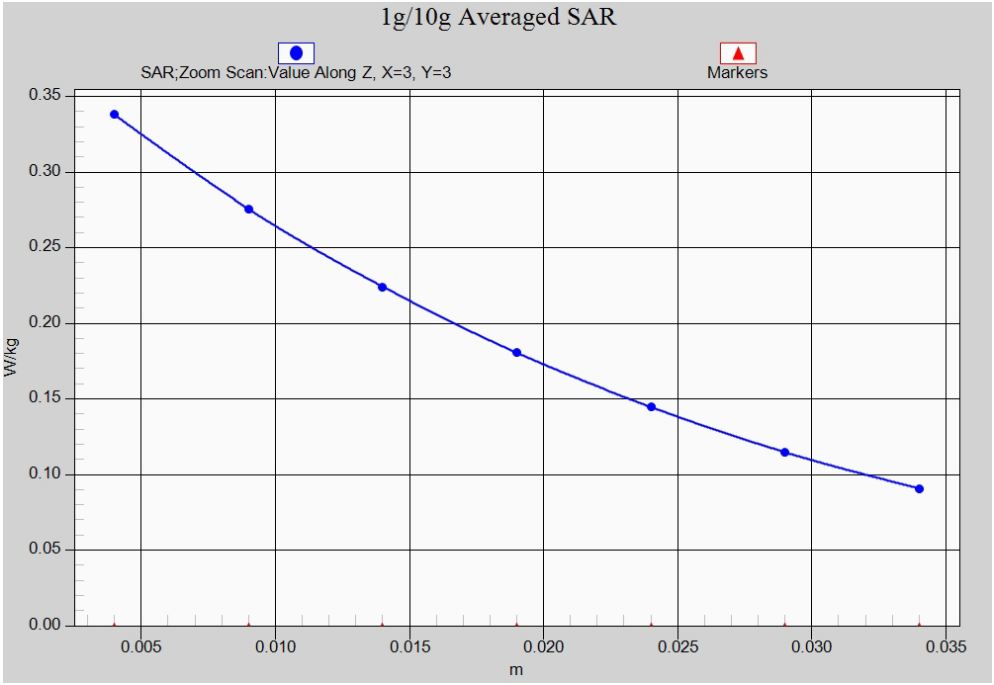


Fig. 18-1 Z-Scan at power reference point (LTE Band17)

Wifi 802.11b Right Cheek Channel 6

Date: 2016-3-11
Electronics: DAE4 Sn777
Medium: Head 2450 MHz
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.823 mho/m; ε_r = 38.671; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: WLan 2450 Frequency: 2437 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(7.24, 7.24, 7.24)

Area Scan (91x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.970 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.49 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 2.23 W/kg
SAR(1 g) = 0.866 W/kg; SAR(10 g) = 0.421 W/kg
Maximum value of SAR (measured) = 0.939 W/kg

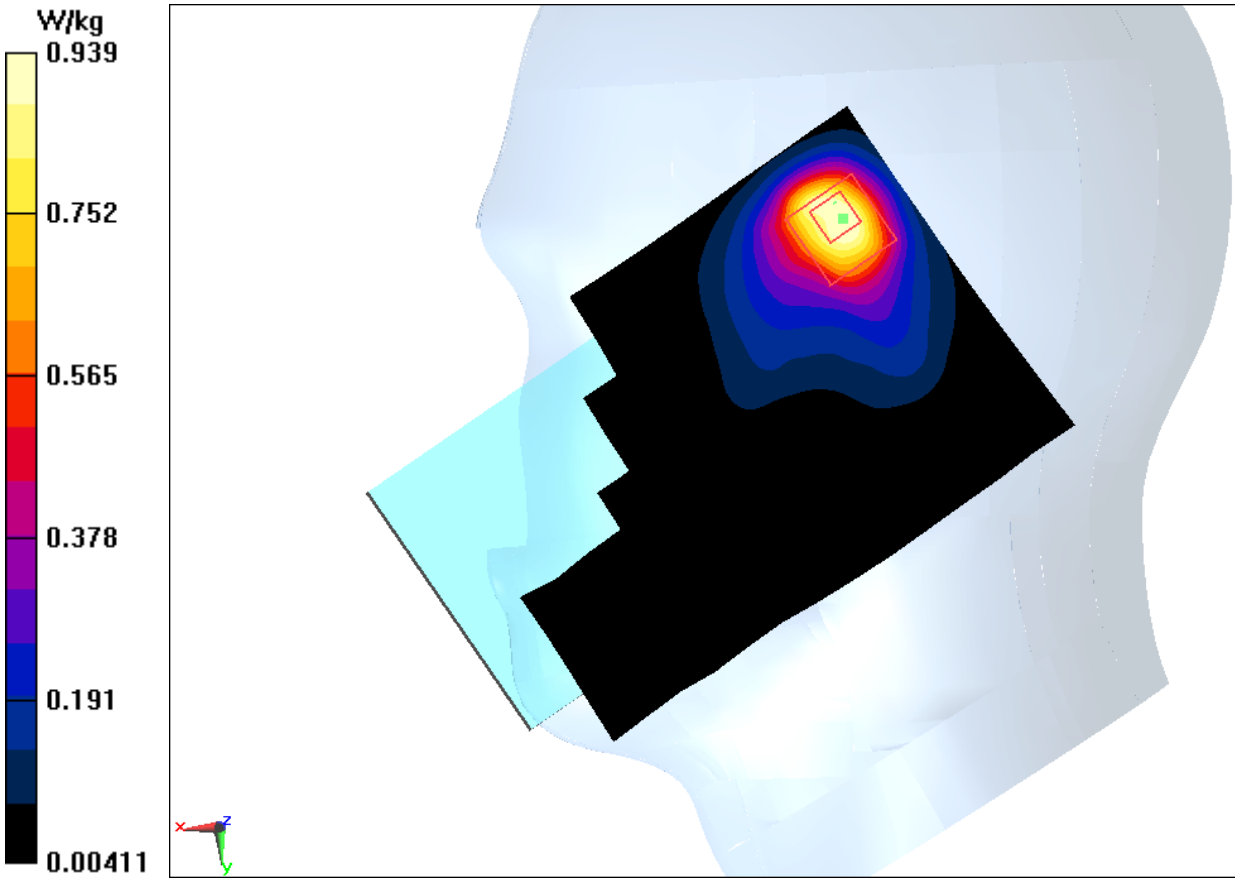


Fig.19 2450 MHz

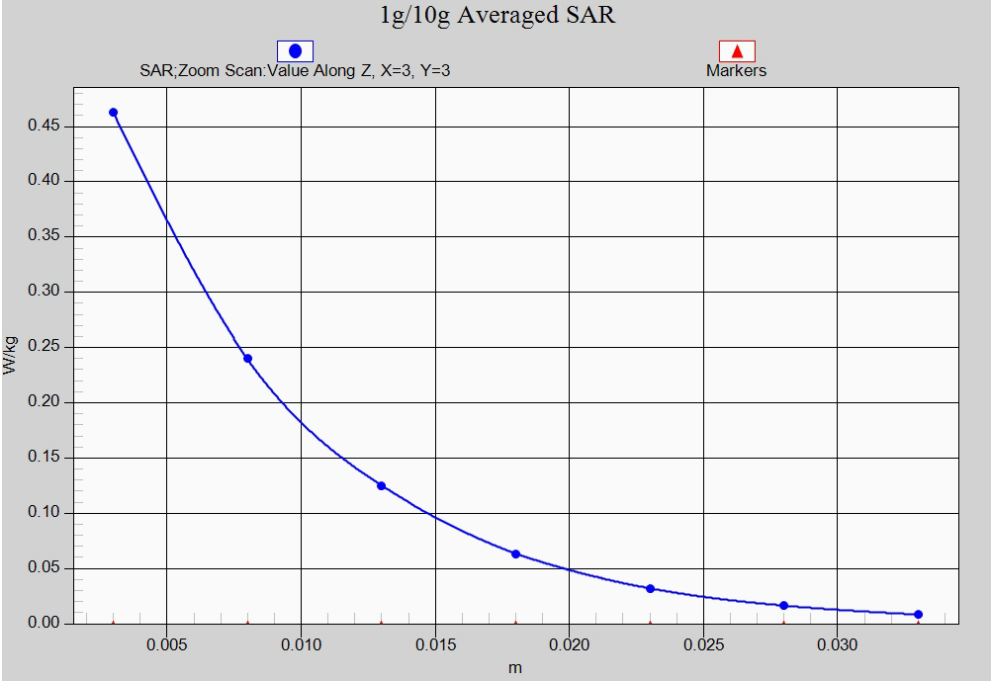


Fig. 19-1 Z-Scan at power reference point (2450 MHz)

Wifi 802.11b Body Top Channel 6

Date: 2016-3-11
Electronics: DAE4 Sn777
Medium: Body 2450 MHz
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.971 mho/m; ε_r = 51.743; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: WLan 2450 Frequency: 2437 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(7.35, 7.35, 7.35)

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.247 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.140 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.365 W/kg
SAR(1 g) = 0.205 W/kg; SAR(10 g) = 0.110 W/kg
Maximum value of SAR (measured) = 0.256 W/kg

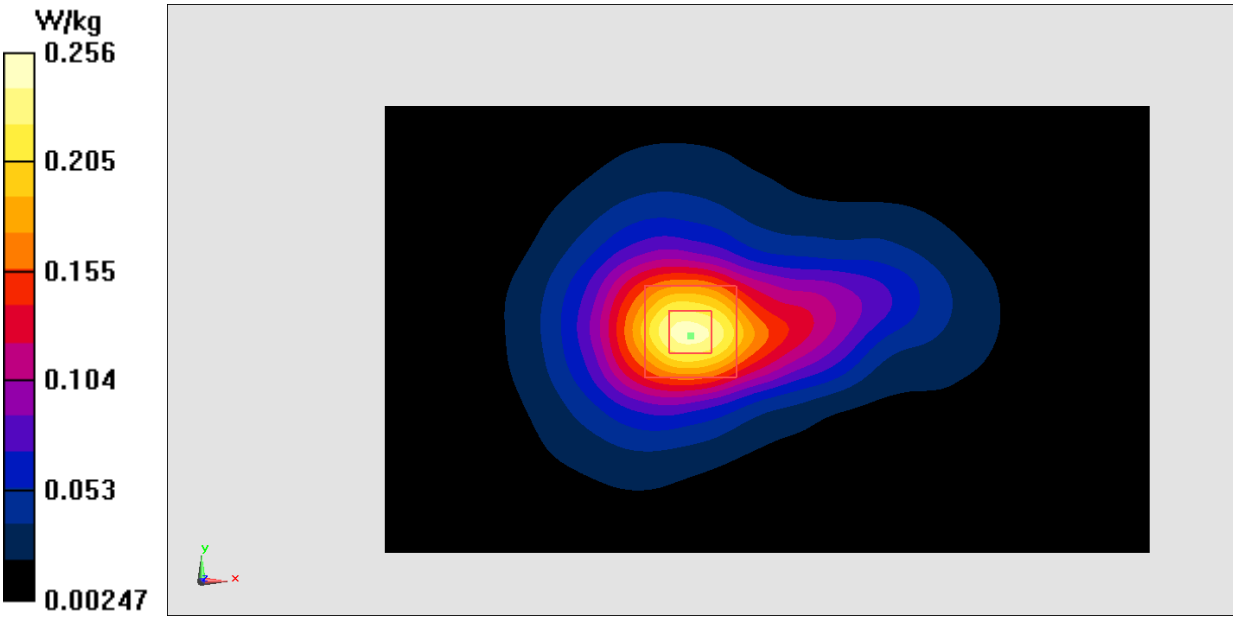


Fig.20 2450 MHz