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.											
2535	**21100**	**1RB_Low**	**Left**	**Touch**	**Fig.13**	**21.81**	**22.6**	**0.075**	**0.09**	**0.143**	**0.17**	**0.04**
2535	21100	1RB_Low	Left	Tilt	/	21.81	22.6	0.022	0.03	0.041	0.05	-0.02
2535	21100	1RB_Low	Right	Touch	/	21.81	22.6	0.044	0.05	0.082	0.10	0.02
2535	21100	1RB_Low	Right	Tilt	/	21.81	22.6	0.039	0.05	0.080	0.10	-0.08
2510	20850	50RB_Low	Left	Touch	/	20.59	21.6	0.052	0.07	0.097	0.12	0.12
2510	20850	50RB_Low	Left	Tilt	/	20.59	21.6	0.018	0.02	0.032	0.04	-0.03
2510	20850	50RB_Low	Right	Touch	/	20.59	21.6	0.038	0.05	0.073	0.09	0.05
2510	20850	50RB_Low	Right	Tilt	/	20.59	21.6	0.026	0.03	0.054	0.07	0.01

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-14: SAR Values (LTE Band7 - Body) AP OFF

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C											
Frequency		Mode/ Headset	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.										
2535	21100	1RB_Low	Front	/	21.81	22.6	0.212	0.25	0.397	0.48	0.02
2560	21350	1RB_High	Rear	/	21.70	22.6	0.314	0.39	0.637	0.78	-0.08
2535	**21100**	**1RB_Low**	**Rear**	**Fig 14**	**21.81**	**22.6**	**0.370**	**0.44**	**0.715**	**0.86**	**-0.08**
2510	20850	1RB_Low	Rear	/	21.80	22.6	0.367	0.44	0.705	0.85	-0.08
2510	20850	50RB_ Low	Front	/	20.59	21.6	0.159	0.20	0.315	0.40	-0.03
2510	20850	50RB_ Low	Rear	/	20.59	21.6	0.285	0.36	0.585	0.74	0.05
2535	21100	100RB	Rear	/	20.44	21.6	0.274	0.36	0.557	0.73	-0.08

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

Note2: The LTE mode is QPSK_20MHz.

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Table 14.2-15: SAR Values (LTE Band7 - Body) AP ON

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C											
Frequency		Mode/ Headset	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.										
2535	21100	1RB_Low	Front	/	17.97	18.5	0.179	0.20	0.384	0.43	0.05
2560	21350	1RB_Low	Rear	/	17.67	18.5	0.293	0.35	0.656	0.79	-0.16
2535	21100	1RB_Low	Rear	/	17.97	18.5	0.336	0.38	0.731	0.83	0.04
2510	20850	1RB_Low	Rear	/	17.79	18.5	0.316	0.37	0.683	0.80	0.13
2535	21100	1RB_Low	Left	/	17.97	18.5	0.050	0.06	0.090	0.10	-0.02
2560	**21350**	**1RB_Low**	**Bottom**	**Fig.15**	**17.67**	**18.5**	**0.456**	**0.55**	**1.040**	**1.26**	**0.11**
2535	21100	1RB_Low	Bottom	/	17.97	18.5	0.417	0.47	0.941	1.06	-0.04
2510	20850	1RB_Low	Bottom	/	17.79	18.5	0.371	0.44	0.832	0.98	-0.15
2510	20850	50RB_Low	Front	/	17.57	18.5	0.185	0.23	0.372	0.46	-0.02
2510	20850	50RB_Low	Rear	/	17.57	18.5	0.322	0.40	0.725	0.90	0.02
2510	20850	50RB_Low	Left	/	17.57	18.5	0.055	0.07	0.088	0.11	0.04
2560	21350	50RB_Low	Bottom	/	17.52	18.5	0.437	0.55	0.985	1.23	0.02
2535	21100	50RB_Low	Bottom	/	17.50	18.5	0.387	0.49	0.873	1.10	-0.02
2510	20850	50RB_Low	Bottom	/	17.57	18.5	0.378	0.47	0.848	1.05	0.05
2535	21100	100RB	Rear	/	17.51	18.5	0.289	0.36	0.632	0.79	0.17
2535	21100	100RB	Bottom	/	17.51	18.5	0.433	0.54	0.980	1.23	0.04
2560	21350	1RB_Low H1	Bottom	/	17.67	18.5	0.411	0.50	0.950	1.15	-0.02
2560	21350	1RB_Low H2	Bottom	/	17.67	18.5	0.425	0.51	1.000	1.21	0.02

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

Note2: The LTE mode is QPSK_20MHz.

Table 14.2-16: 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_Low**	**Left**	**Touch**	**Fig.16**	**23.56**	**24.2**	**0.271**	**0.31**	**0.354**	**0.41**	**-0.02**
782	23230	1RB_Low	Left	Tilt	/	23.56	24.2	0.185	0.21	0.264	0.31	0.03
782	23230	1RB_Low	Right	Touch	/	23.56	24.2	0.212	0.25	0.306	0.35	0.02
782	23230	1RB_Low	Right	Tilt	/	23.56	24.2	0.182	0.21	0.266	0.31	-0.01
782	23230	25RB_Low	Left	Touch	/	22.69	23.2	0.182	0.20	0.273	0.31	0.04
782	23230	25RB_Low	Left	Tilt	/	22.69	23.2	0.147	0.17	0.211	0.24	0.02
782	23230	25RB_Low	Right	Touch	/	22.69	23.2	0.154	0.17	0.226	0.25	-0.05
782	23230	25RB_Low	Right	Tilt	/	22.69	23.2	0.137	0.15	0.200	0.22	0.01

Note1: The LTE mode is QPSK_10MHz.

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Table 14.2-17: SAR Values (LTE Band13 - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C											
Frequency		Mode/ Headset	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_Low	Front	/	23.56	24.2	0.252	0.29	0.356	0.41	-0.03
782	**23230**	**1RB_Low**	**Rear**	**Fig.17**	**23.56**	**24.2**	**0.364**	**0.42**	**0.482**	**0.56**	**-0.09**
782	23230	1RB_Low	Left	/	23.56	24.2	0.225	0.26	0.338	0.39	-0.07
782	23230	1RB_Low	Bottom	/	23.56	24.2	0.081	0.09	0.127	0.15	0.05
782	23230	25RB_Low	Front	/	22.69	23.2	0.214	0.24	0.292	0.33	0.14
782	23230	25RB_Low	Rear	/	22.69	23.2	0.263	0.30	0.372	0.42	-0.04
782	23230	25RB_Low	Left	/	22.69	23.2	0.183	0.21	0.274	0.31	0.01
782	23230	25RB_Low	Bottom	/	22.69	23.2	0.066	0.07	0.104	0.12	0.18

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

Note2: The LTE mode is QPSK_10MHz.

Table 14.2-18: 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.											
711	**23800**	**1RB_High**	**Left**	**Touch**	**Fig.18**	**23.73**	**24.2**	**0.152**	**0.17**	**0.194**	**0.22**	**0.17**
711	23800	1RB_High	Left	Tilt	/	23.73	24.2	0.092	0.10	0.131	0.15	0.04
711	23800	1RB_High	Right	Touch	/	23.73	24.2	0.101	0.11	0.145	0.16	-0.14
711	23800	1RB_High	Right	Tilt	/	23.73	24.2	0.087	0.10	0.126	0.14	-0.02
709	23780	25RB_High	Left	Touch	/	22.56	23.2	0.096	0.11	0.143	0.17	-0.05
709	23780	25RB_High	Left	Tilt	/	22.56	23.2	0.071	0.08	0.101	0.12	0.01
709	23780	25RB_High	Right	Touch	/	22.56	23.2	0.074	0.09	0.107	0.12	0.06
709	23780	25RB_High	Right	Tilt	/	22.56	23.2	0.051	0.06	0.074	0.09	0.08

Note1: The LTE mode is QPSK_10MHz.

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Table 14.2-19: SAR Values (LTE Band17 - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C											
Frequency		Mode/ Headset	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.										
711	23800	1RB_High	Front	/	23.73	24.2	0.153	0.17	0.218	0.24	-0.01
711	**23800**	**1RB_High**	**Rear**	**Fig.19**	**23.73**	**24.2**	**0.265**	**0.30**	**0.366**	**0.41**	**0.05**
711	23800	1RB_High	Left	/	23.73	24.2	0.229	0.26	0.338	0.38	-0.01
711	23800	1RB_High	Bottom	/	23.73	24.2	0.057	0.06	0.090	0.10	0.18
709	23780	25RB_High	Front	/	22.56	23.2	0.166	0.19	0.229	0.27	0.12
709	23780	25RB_High	Rear	/	22.56	23.2	0.194	0.22	0.277	0.32	0.00
709	23780	25RB_High	Left	/	22.56	23.2	0.166	0.19	0.245	0.28	-0.09
709	23780	25RB_High	Bottom	/	22.56	23.2	0.047	0.05	0.074	0.09	0.01

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

Note2: The LTE mode is QPSK_10MHz.

Table 14.2-20: 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.											
2412	1	802.11b	Right	Touch	/	17.42	18.0	0.395	0.45	0.816	0.93	0.11

Note1: The battery1 is TLp025H7C (2500043C7Y).

Table 14.2-21: SAR Values (GSM1900 - 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	661	Bottom	/	27.38	27.8	0.609	0.67	1.130	1.24	0.06

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

Note2: The LTE mode is QPSK_20MHz.

Note3: The battery1 is TLp025HF (53264353TMC)

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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.										
848.8	**251**	**Left**	**Touch**	**Fig.1**	**32.37**	**33.3**	**0.219**	**0.27**	**0.283**	**0.35**	**0.00**

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.										
848.8	**251**	**GPRS (3)**	**Rear**	**Fig.2**	**30.38**	**30.7**	**0.486**	**0.52**	**0.621**	**0.67**	**0.07**

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**	**Left**	**Touch**	**Fig.3**	**29.71**	**30.5**	**0.189**	**0.23**	**0.312**	**0.37**	**0.11**

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.										
1880	**661**	**GPRS (3)**	**Bottom**	**Fig.4**	**27.38**	**27.8**	**0.616**	**0.68**	**1.190**	**1.31**	**-0.03**

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.										
836.4	**4182**	**Left**	**Touch**	**Fig.5**	**24.09**	**24.5**	**0.232**	**0.25**	**0.307**	**0.34**	**0.04**

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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.									
826.4	**4132**	**Rear**	**Fig.6**	**24.06**	**24.5**	**0.350**	**0.39**	**0.447**	**0.49**	**0.08**

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.										
1907.6	**9938**	**Left**	**Touch**	**Fig.7**	**23.09**	**23.5**	**0.186**	**0.20**	**0.307**	**0.34**	**0.14**

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.									
1852.4	**9662**	**Bottom**	**Fig.8**	**22.71**	**23.5**	**0.492**	**0.59**	**0.957**	**1.15**	**-0.11**

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.											
1880	**18900**	**1RB_Low**	**Left**	**Touch**	**Fig.9**	**23.19**	**23.7**	**0.253**	**0.28**	**0.418**	**0.47**	**0.08**

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.										
19100	**1900**	**1RB_Low**	**Bottom**	**Fig.10**	**23.05**	**23.7**	**0.557**	**0.65**	**1.030**	**1.20**	**0.08**

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

Note2: The LTE mode is QPSK_20MHz.

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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.											
1745	**20300**	**1RB_Low**	**Left**	**Touch**	**Fig.11**	**23.69**	**24.0**	**0.125**	**0.13**	**0.198**	**0.21**	**-0.15**

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_Low**	**Bottom**	**Fig.12**	**23.45**	**24.0**	**0.470**	**0.53**	**0.913**	**1.04**	**-0.15**

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.											
2535	**21100**	**1RB_Low**	**Left**	**Touch**	**Fig.13**	**21.81**	**22.6**	**0.075**	**0.09**	**0.143**	**0.17**	**0.04**

Note1: The LTE mode is QPSK_20MHz.

Table 14.3-14: SAR Values (LTE Band7 - Body) AP OFF

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.										
2535	**21100**	**1RB_Low**	**Rear**	**Fig 14**	**21.81**	**22.6**	**0.370**	**0.44**	**0.715**	**0.86**	**-0.08**

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

Note2: The LTE mode is QPSK_20MHz.

Table 14.3-15: SAR Values (LTE Band7 - Body) AP ON

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.										
2560	**21350**	**1RB_Low**	**Bottom**	**Fig.15**	**17.67**	**18.5**	**0.456**	**0.55**	**1.040**	**1.26**	**0.11**

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

Note2: The LTE mode is QPSK_20MHz.

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Table 14.3-16: 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_Low**	**Left**	**Touch**	**Fig.16**	**23.56**	**24.2**	**0.271**	**0.31**	**0.354**	**0.41**	**-0.02**

Note1: The LTE mode is QPSK_10MHz.

Table 14.3-17: 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_Low**	**Rear**	**Fig.17**	**23.56**	**24.2**	**0.364**	**0.42**	**0.482**	**0.56**	**-0.09**

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

Table 14.3-18: 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.											
711	**23800**	**1RB_High**	**Left**	**Touch**	**Fig.18**	**23.73**	**24.2**	**0.152**	**0.17**	**0.194**	**0.22**	**0.17**

Note1: The LTE mode is QPSK_10MHz.

Table 14.3-19: 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.										
711	**23800**	**1RB_High**	**Rear**	**Fig.19**	**23.73**	**24.2**	**0.265**	**0.30**	**0.366**	**0.41**	**0.05**

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

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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.										
2412	1	Left	Touch	/	17.42	18.0	0.197	0.23	0.352	0.40	0.08
2412	1	Left	Tilt	/	17.42	18.0	0.207	0.24	0.404	0.46	0.07
2412	1	Right	Touch	/	17.42	18.0	0.417	0.48	0.831	0.95	-0.17
2412	1	Right	Tilt	/	17.42	18.0	0.282	0.32	0.548	0.63	0.12

As shown above table, the initial test position for head is “Right Touch”. 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.										
2412	1	Left	Touch	/	17.42	18.0	0.209	0.24	0.387	0.44	0.08
2412	**1**	**Right**	**Touch**	**Fig.20**	**17.42**	**18.0**	**0.400**	**0.46**	**0.832**	**0.95**	**-0.17**
2412	1	Right	Tilt	/	17.42	18.0	0.272	0.31	0.566	0.65	0.12
2462	11	Right	Touch	/	16.32	17.0	0.332	0.39	0.696	0.81	-0.09

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.						
2412	1	Right	Touch	97.51%	100%	**0.95**	**0.97**
2412	1	Left	Touch	97.51%	100%	**0.44**	**0.45**

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

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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.									
2412	1	Front	/	17.42	18.0	0.108	0.12	0.196	0.22	-0.19
2412	1	Rear	/	17.42	18.0	0.104	0.12	0.188	0.21	-0.13
2412	1	Left	/	17.42	18.0	0.060	0.07	0.111	0.13	-0.09
2412	1	Top	/	17.42	18.0	0.091	0.10	0.160	0.18	0.12

As shown above table, the initial test position for body is “Front”. 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.									
2412	**1**	**Front**	**Fig.21**	**17.42**	**18.0**	**0.110**	**0.13**	**0.195**	**0.22**	**-0.19**

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 14.4-6: 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.					
2412	1	Front	97.51%	100%	**0.22**	**0.23**

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

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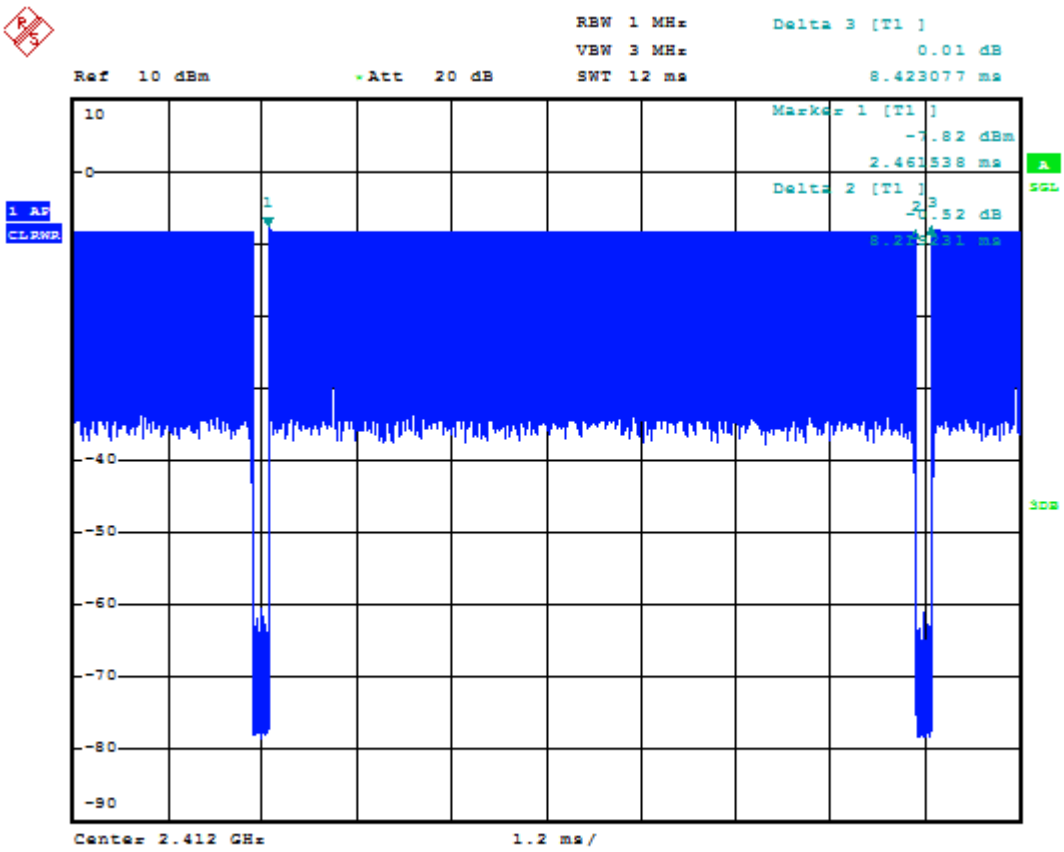

Picture 14.1 Duty factor plot

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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 GSM1900 (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	661	Bottom	10	1.190	1.186	1.00	/

Table 15.2: 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.						
1852.4	9662	Bottom	10	0.957	0.951	1.01	/

Table 15.3: SAR Measurement Variability for Body LTE Band2 (1g)

Frequency		Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
MHz	Ch.						
1900	19100	Bottom	10	1.030	1.016	1.01	/

Table 15.4: SAR Measurement Variability for Body LTE Band4 (1g)

Frequency		Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
MHz	Ch.						
1720	20300	Bottom	10	0.913	0.901	1.01	/

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Table 15.5: SAR Measurement Variability for Body LTE Band7 (1g) AP ON

Frequency		Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
MHz	Ch.						
2560	21350	Bottom	10	1.040	1.021	1.02	/

Table 15.6: SAR Measurement Variability for WLAN Head (1g)

Frequency		Side	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
MHz	Ch.						
2412	1	Right	Touch	0.832	0.821	1.01	/

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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

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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

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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	∞

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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										

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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

END OF REPORT BODY

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ANNEX A Graph Results

850 Left Cheek High

Date: 2016-4-2
Electronics: DAE4 Sn777
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.939 mho/m; εr = 41.022; ρ = 1000 kg/m^3
Ambient Temperature: 22.9^{o}C Liquid Temperature: 22.5^{o}C
Communication System: GSM 850 Frequency: 848.8 MHz Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3617 ConvF(9.56, 9.56, 9.56)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.305 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.602 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.349 W/kg
SAR(1 g) = 0.283 W/kg; SAR(10 g) = 0.219 W/kg
Maximum value of SAR (measured) = 0.312 W/kg

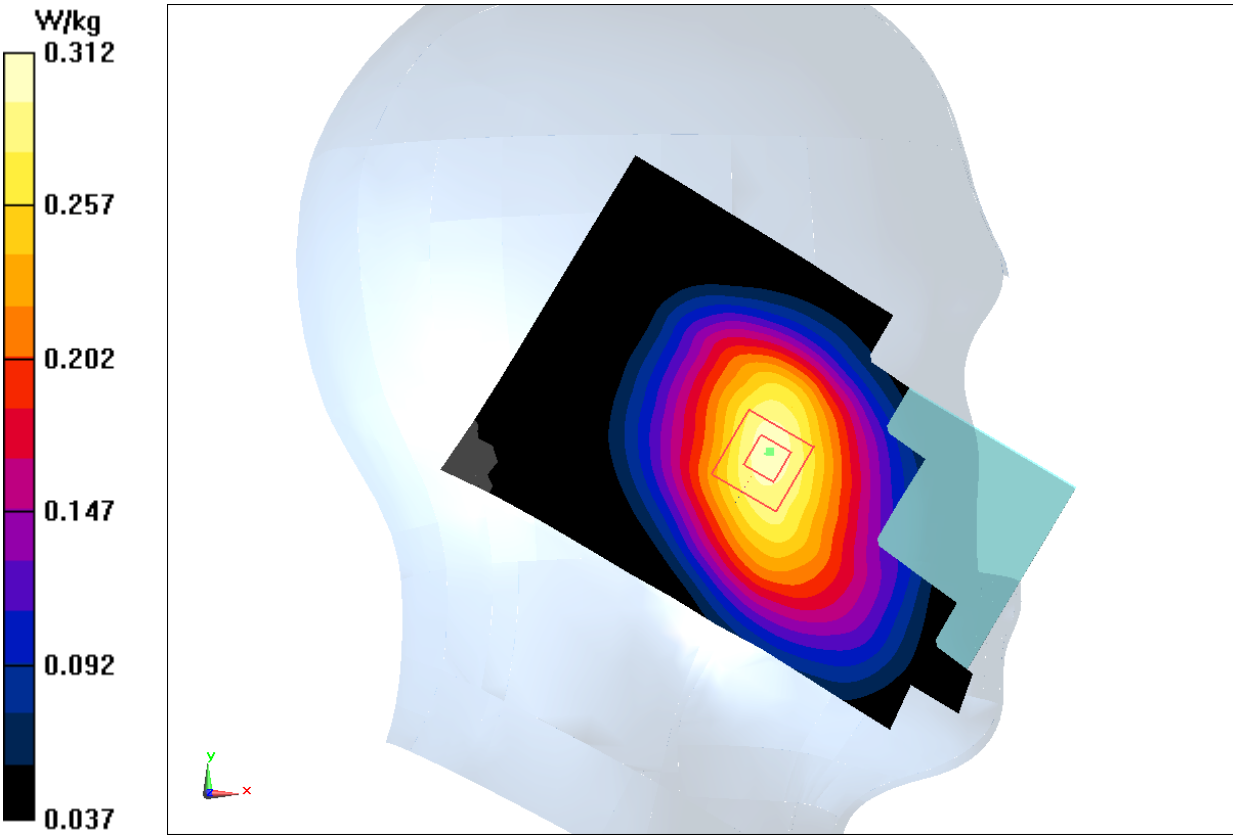

Fig.1 850MHz

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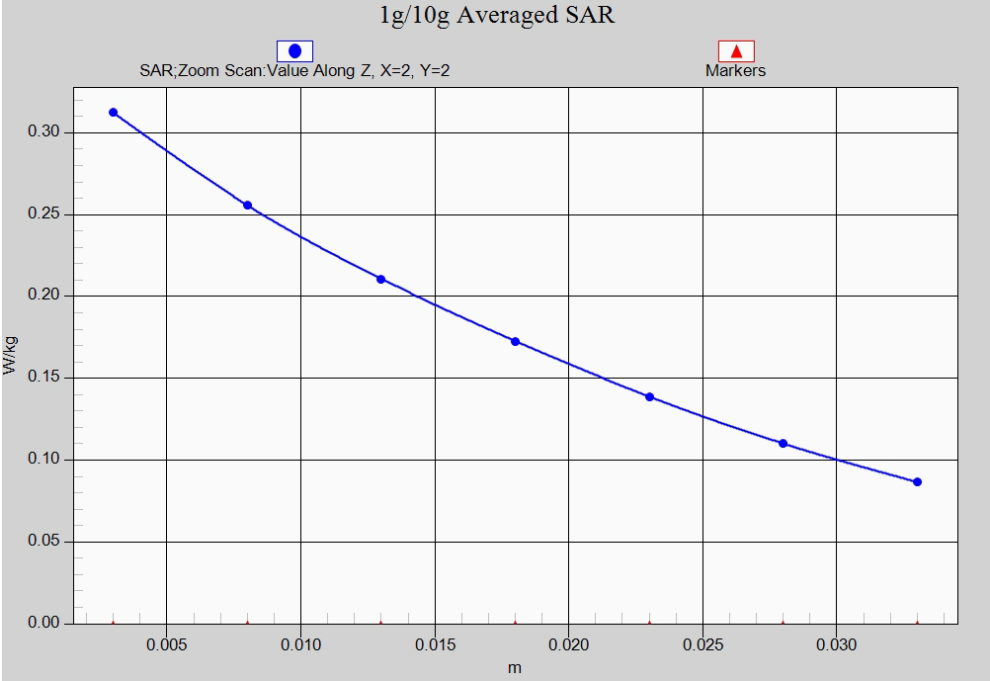

Fig. 1-1 Z-Scan at power reference point (850 MHz)

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850 Body Rear High

Date: 2016-4-2
Electronics: DAE4 Sn777
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.956 mho/m; εr = 56.311; ρ = 1000 kg/m^3
Ambient Temperature: 22.9^{o}C Liquid Temperature: 22.5^{o}C
Communication System: GSM 850 GPRS Frequency: 848.8 MHz Duty Cycle: 1:2.67
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) = 0.846 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.92 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.772 W/kg
SAR(1 g) = 0.621 W/kg; SAR(10 g) = 0.486 W/kg
Maximum value of SAR (measured) = 0.646 W/kg

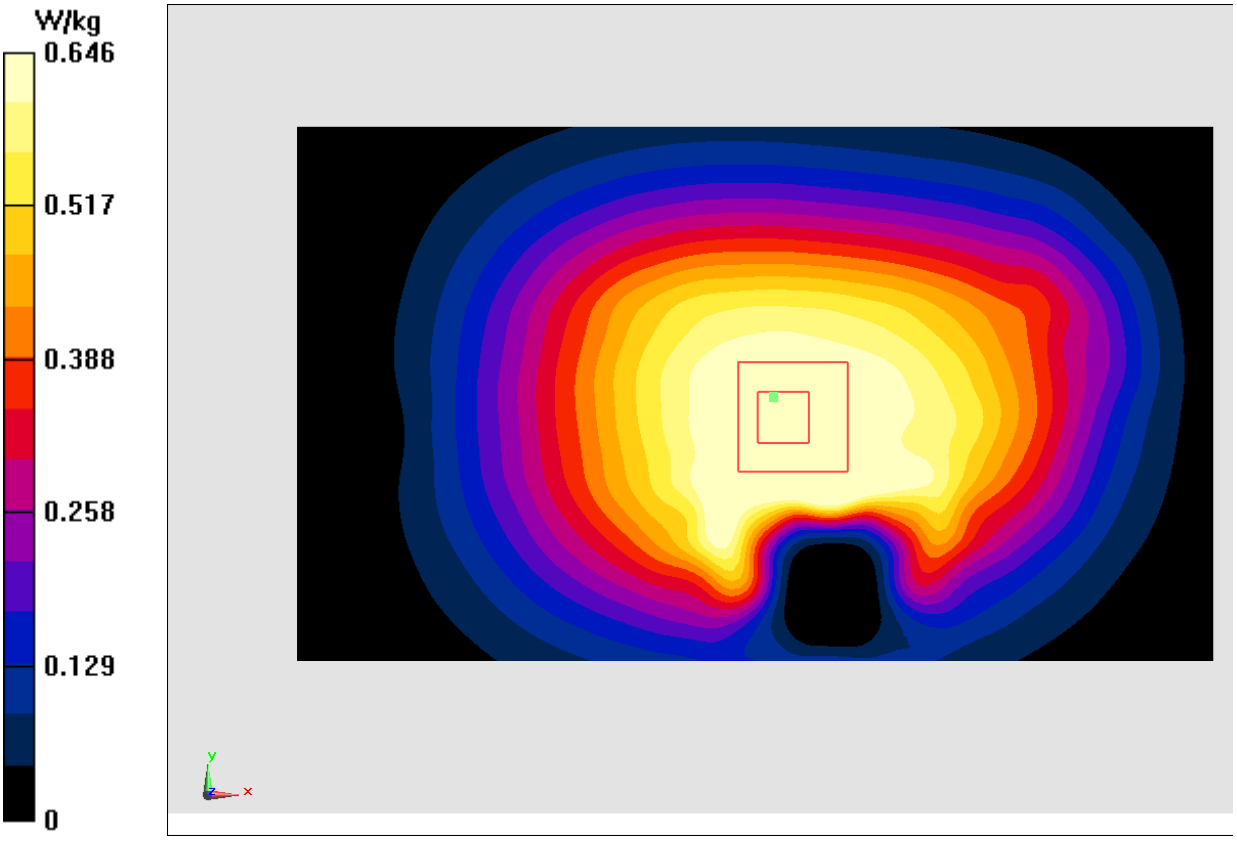

Fig.2 850 MHz

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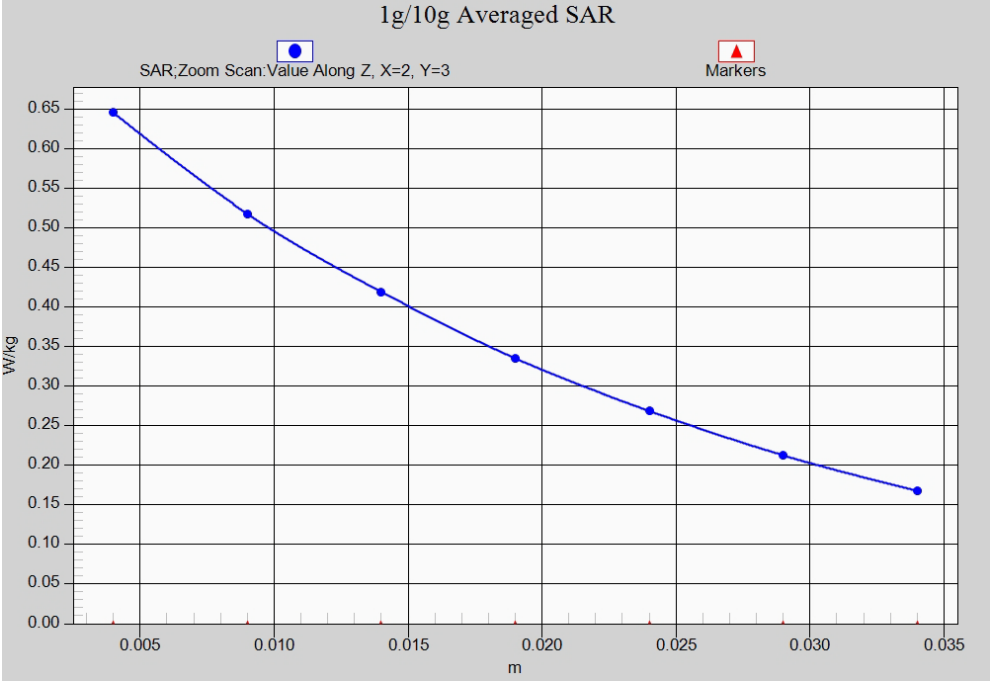

Fig. 2-1 Z-Scan at power reference point (850 MHz)

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1900 Left Cheek High

Date: 2016-4-4
Electronics: DAE4 Sn777
Medium: Head 1900 MHz
Medium parameters used: f = 1909.8 MHz; σ = 1.446 mho/m; εr = 38.761; ρ = 1000 kg/m^3
Ambient Temperature: 22.9^{o}C Liquid Temperature: 22.5^{o}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 (71x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.408 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.489 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.482 W/kg
SAR(1 g) = 0.312 W/kg; SAR(10 g) = 0.189 W/kg
Maximum value of SAR (measured) = 0.405 W/kg

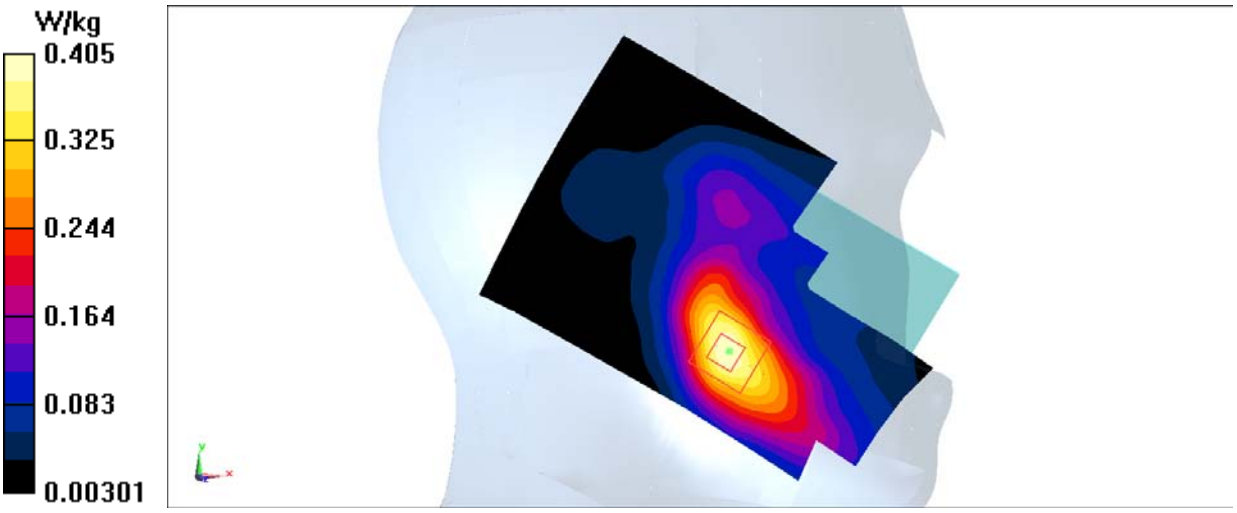

Fig.3 1900 MHz

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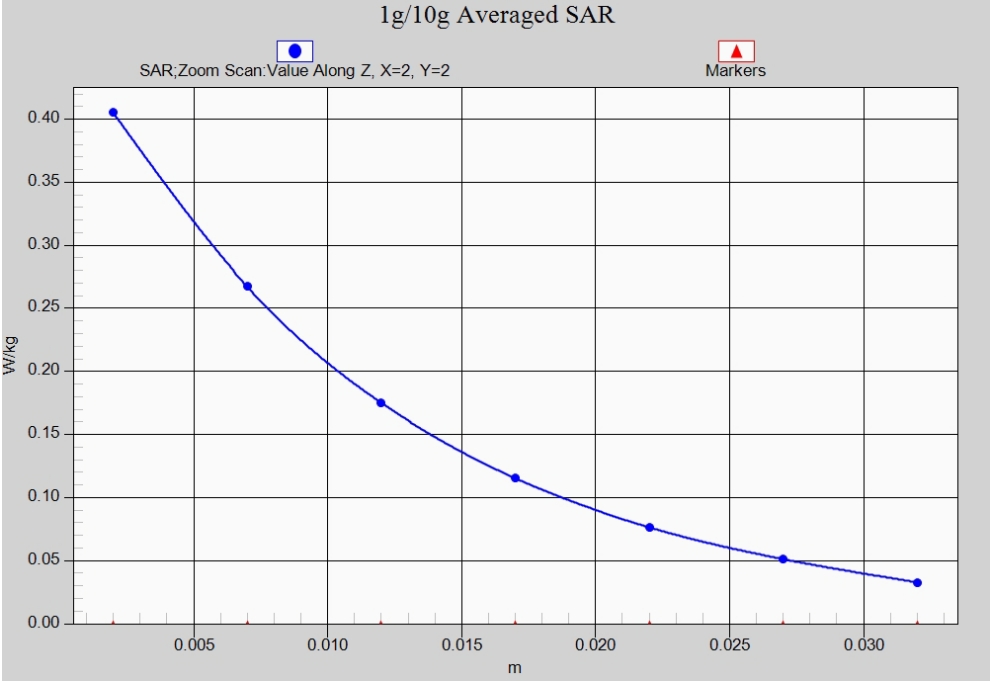

Fig. 3-1 Z-Scan at power reference point (1900 MHz)

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1900 Body Bottom Middle

Date: 2016-4-4
Electronics: DAE4 Sn777
Medium: Body 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.536 mho/m; εr = 55.083; ρ = 1000 kg/m^3
Ambient Temperature: 22.9^{o}C Liquid Temperature: 22.5^{o}C
Communication System: GSM 1900MHz GPRS Frequency: 1880 MHz Duty Cycle: 1:2.67
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) = 1.29 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.31 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 2.16 W/kg
SAR(1 g) = 1.19 W/kg; SAR(10 g) = 0.616 W/kg
Maximum value of SAR (measured) = 1.32 W/kg

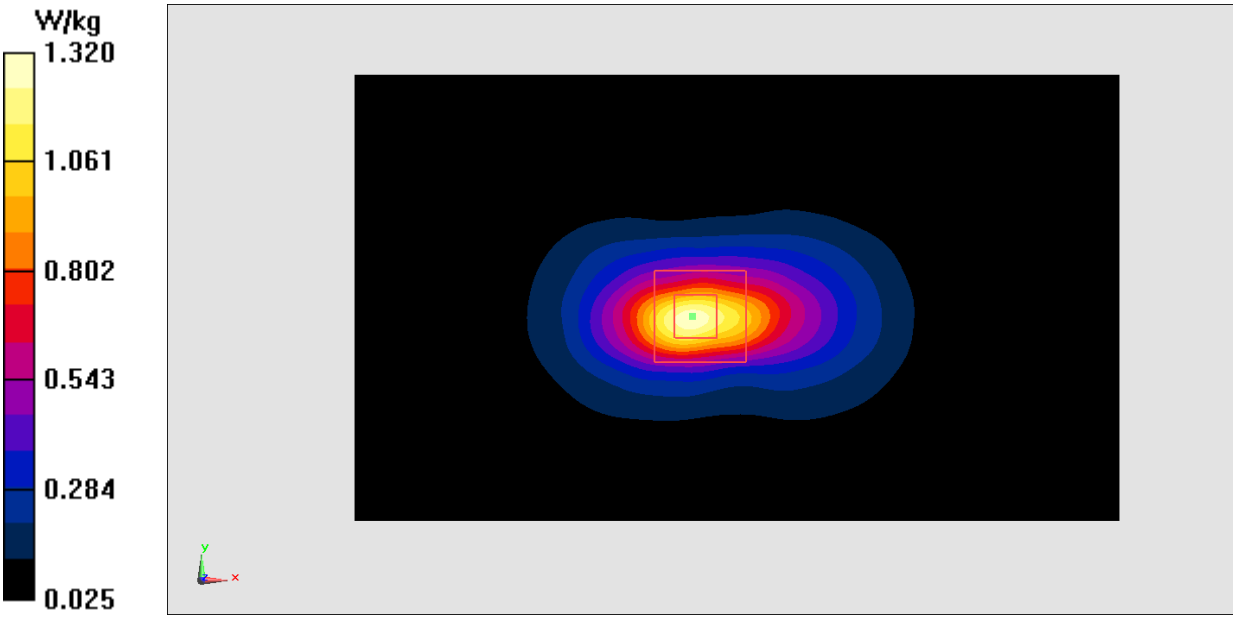

Fig.4 1900 MHz

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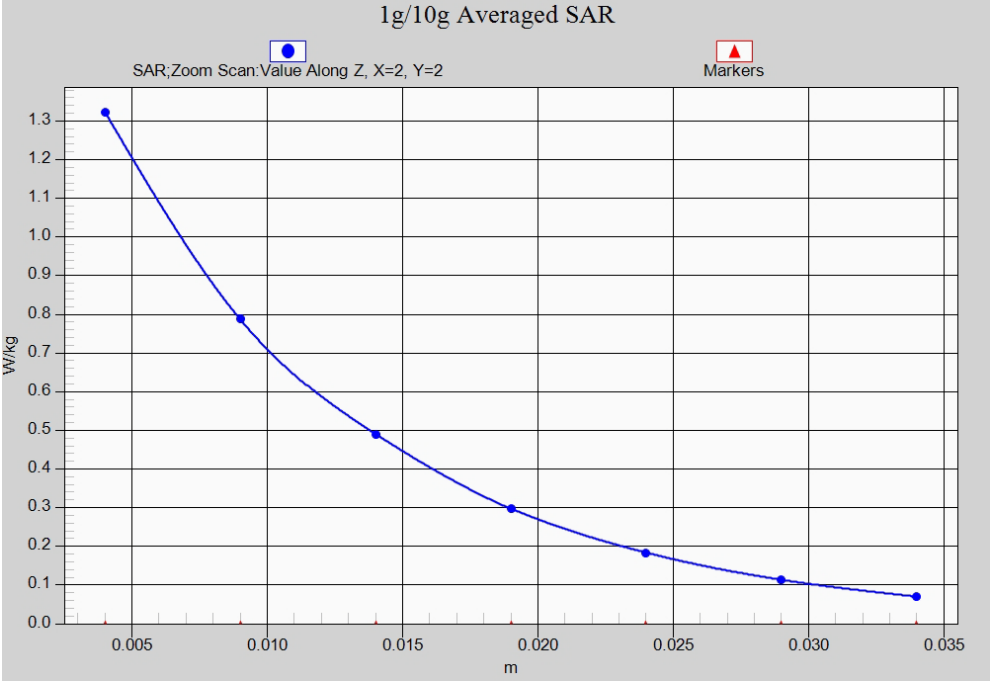

Fig. 4-1 Z-Scan at power reference point (1900 MHz)

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WCDMA 850 Left Cheek Middle

Date: 2016-4-2
Electronics: DAE4 Sn777
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.939 mho/m; εr = 41.495; ρ = 1000 kg/m^3
Ambient Temperature: 22.9^{o}C Liquid Temperature: 22.5^{o}C
Communication System: WCDMA; Frequency: 836.4 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(9.56, 9.56, 9.56)

Area Scan (71x121x1): 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 = 7.080 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.397 W/kg
SAR(1 g) = 0.307 W/kg; SAR(10 g) = 0.232 W/kg
Maximum value of SAR (measured) = 0.348 W/kg

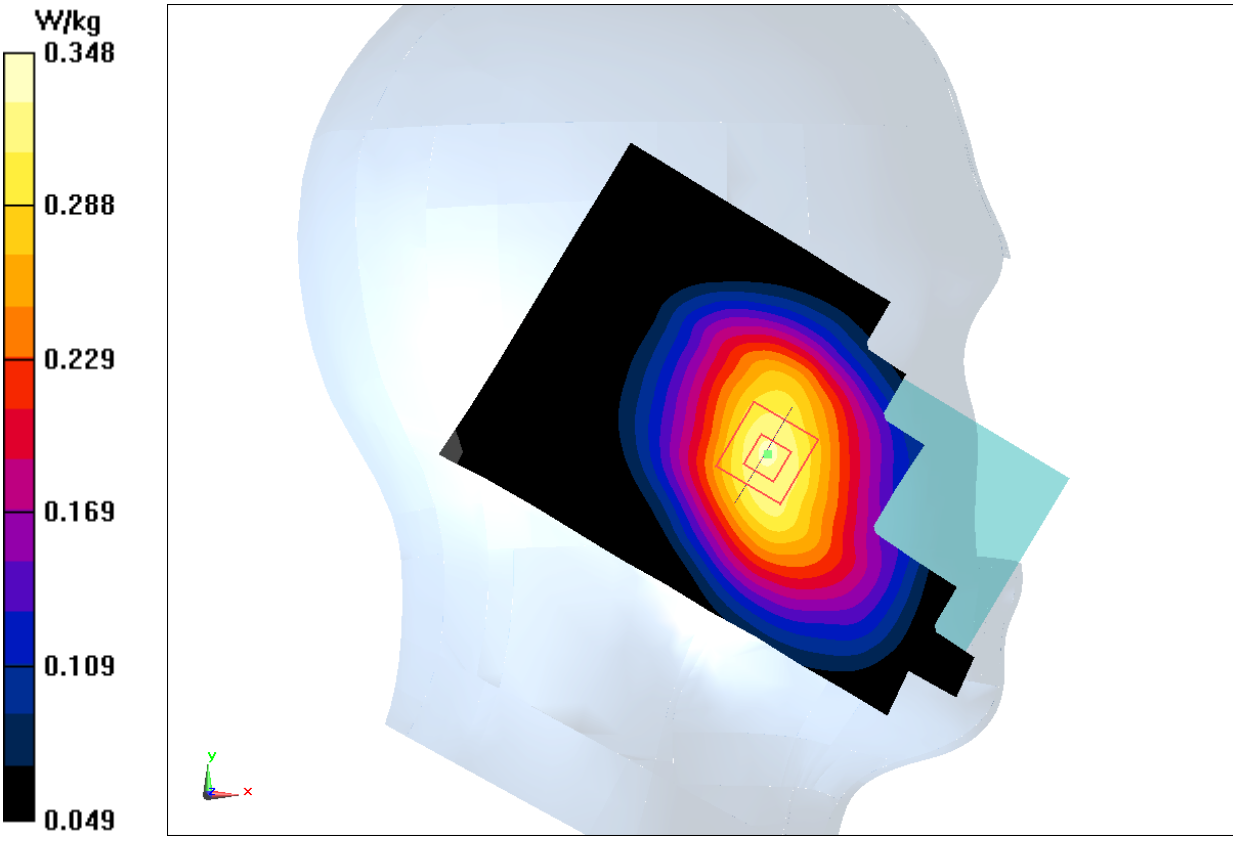

Fig.5 WCDMA 850

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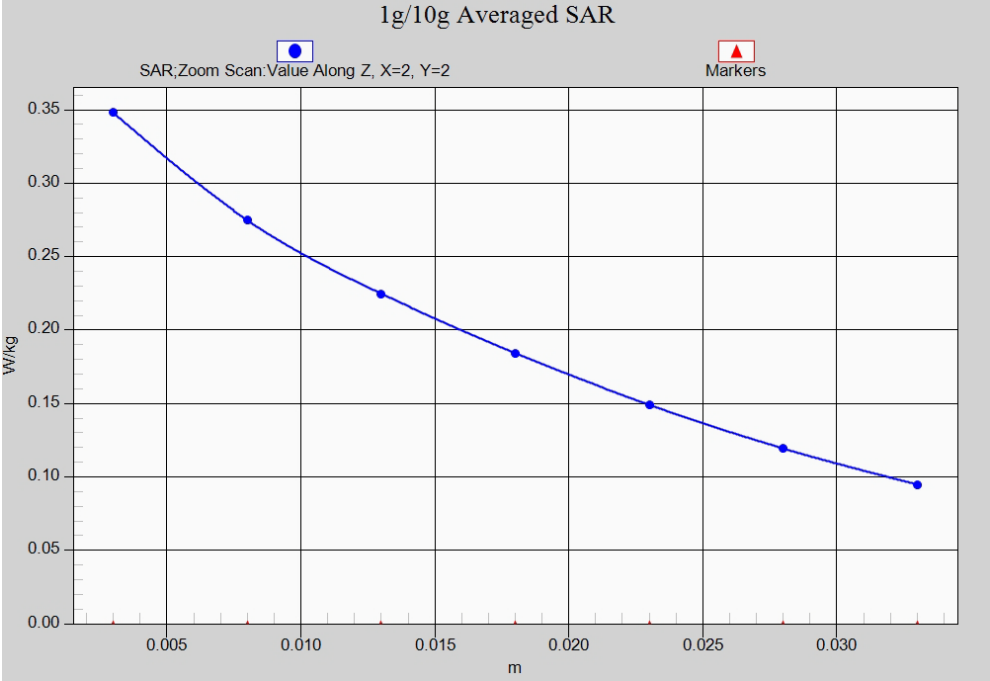

Fig. 5-1 Z-Scan at power reference point (1900 MHz)

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WCDMA 850 Body Rear Low

Date: 2016-4-2
Electronics: DAE4 Sn777
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.929 mho/m; εr = 57.16; ρ = 1000 kg/m^3
Ambient Temperature: 22.9^{o}C Liquid Temperature: 22.5^{o}C
Communication System: WCDMA; Frequency: 826.4 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) = 0.496 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.74 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.551 W/kg
SAR(1 g) = 0.447 W/kg; SAR(10 g) = 0.350 W/kg
Maximum value of SAR (measured) = 0.465 W/kg

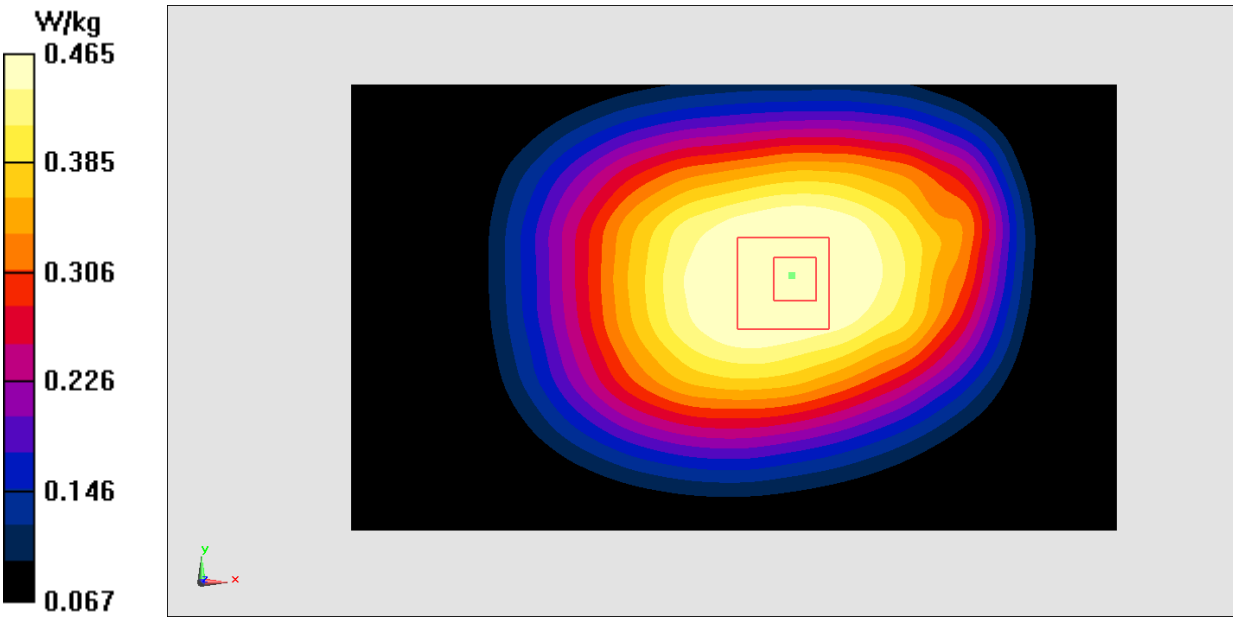

Fig.6 WCDMA 850

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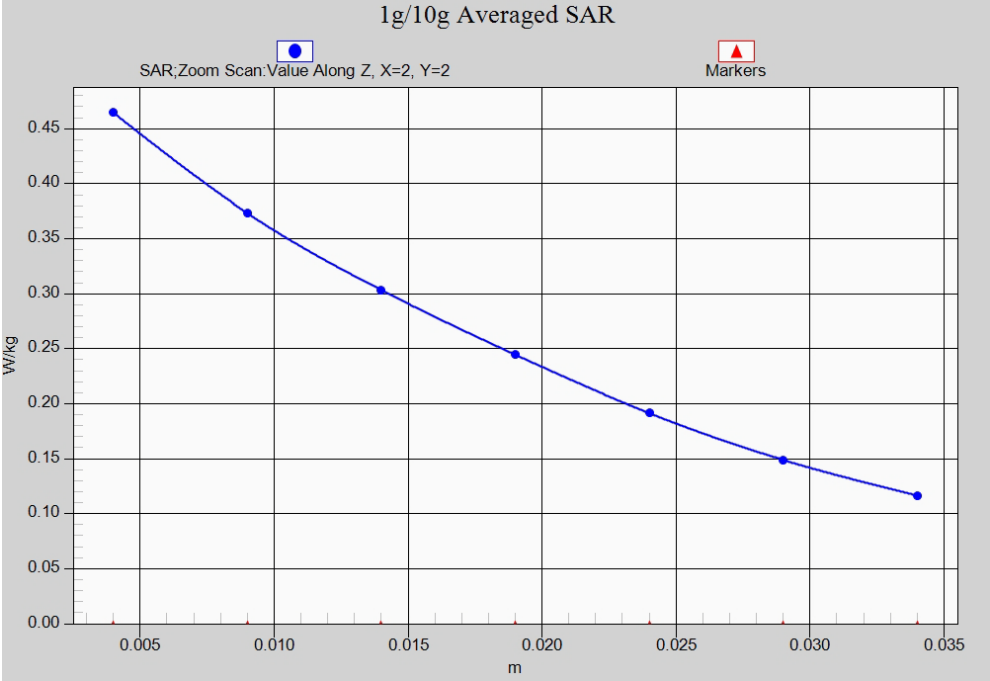

Fig. 6-1 Z-Scan at power reference point (WCDMA850)

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WCDMA 1900 Left Cheek High

Date: 2016-4-4
Electronics: DAE4 Sn777
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.435 mho/m; εr = 38.866; ρ = 1000 kg/m^3
Ambient Temperature: 22.9^{o}C Liquid Temperature: 22.5^{o}C
Communication System: WCDMA 1900 Frequency: 1907.6 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(8.07, 8.07, 8.07)

Area Scan (71x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.412 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.305 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.481 W/kg
SAR(1 g) = 0.307 W/kg; SAR(10 g) = 0.186 W/kg

Maximum value of SAR (measured) = 0.399 W/kg

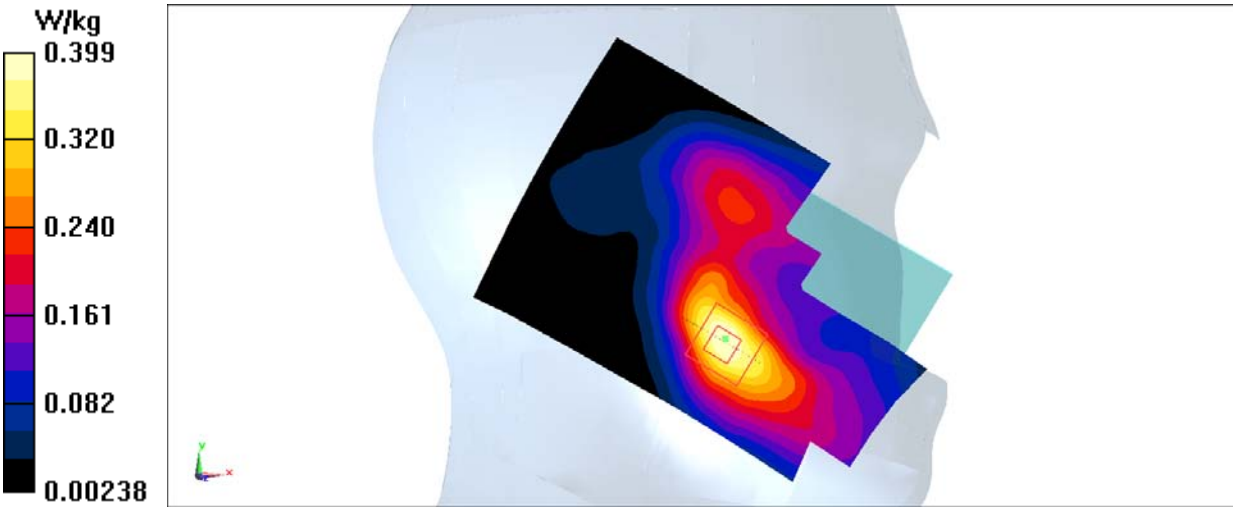

Fig.7 WCDMA1900

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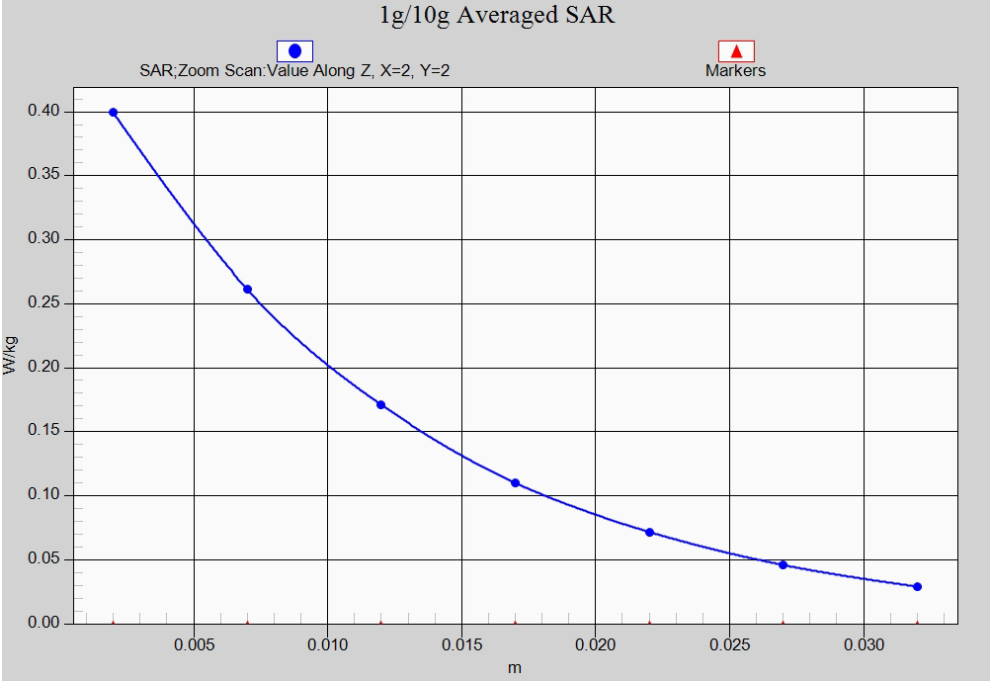

Fig. 7-1 Z-Scan at power reference point (WCDMA850)

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WCDMA 1900 Body Bottom Low

Date: 2016-4-4
Electronics: DAE4 Sn777
Medium: Body 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.495 mho/m; εr = 55.591; ρ = 1000 kg/m^3
Ambient Temperature: 22.9^{o}C Liquid Temperature: 22.5^{o}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) = 1.11 W/kg

Configuration/Bottom Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.58 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 1.72 W/kg
SAR(1 g) = 0.957 W/kg; SAR(10 g) = 0.492 W/kg
Maximum value of SAR (measured) = 1.09 W/kg

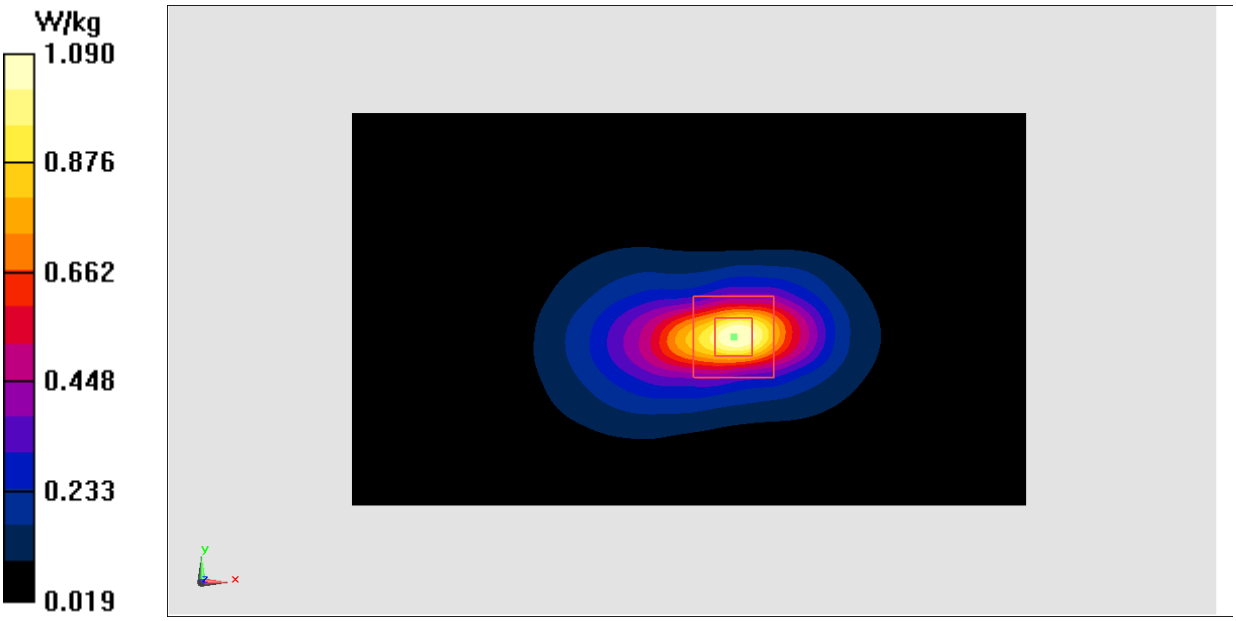

Fig.8 WCDMA1900

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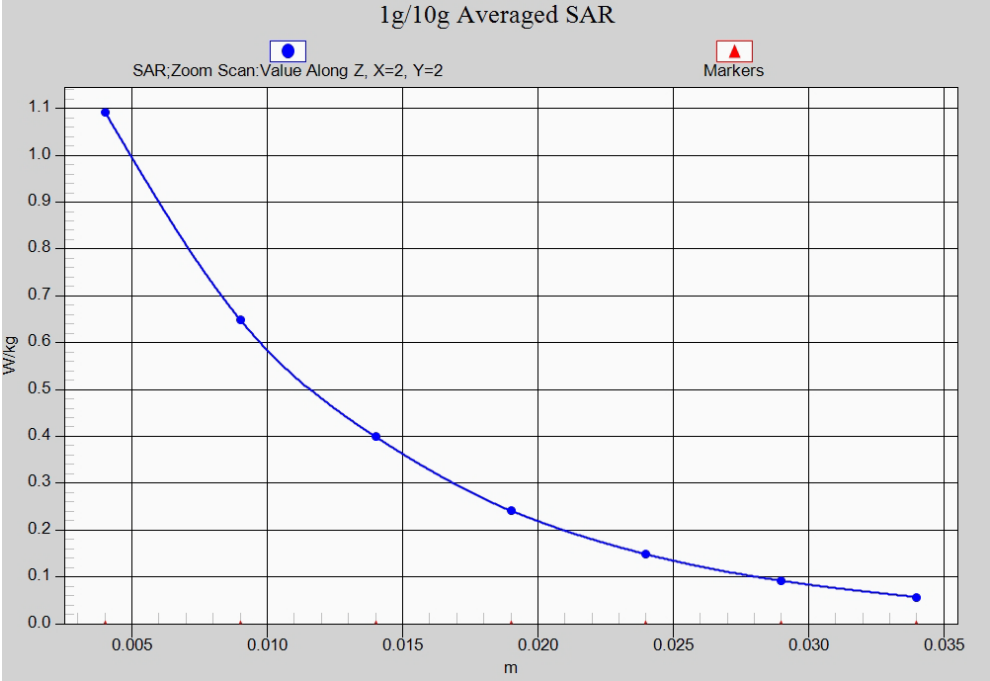

Fig. 8-1 Z-Scan at power reference point (WCDMA1900)

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LTE Band2 Left Cheek Middle with QPSK_20M_1RB_Low

Date: 2016-4-4
Electronics: DAE4 Sn777
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.422 mho/m; εr = 38.89; ρ = 1000 kg/m^3
Ambient Temperature: 22.9^{o}C Liquid Temperature: 22.5^{o}C
Communication System: LTE Band2 Frequency: 1880 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(8.07, 8.07, 8.07)

Area Scan (71x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.514 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.908 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.653 W/kg
SAR(1 g) = 0.418 W/kg; SAR(10 g) = 0.253 W/kg
Maximum value of SAR (measured) = 0.497 W/kg

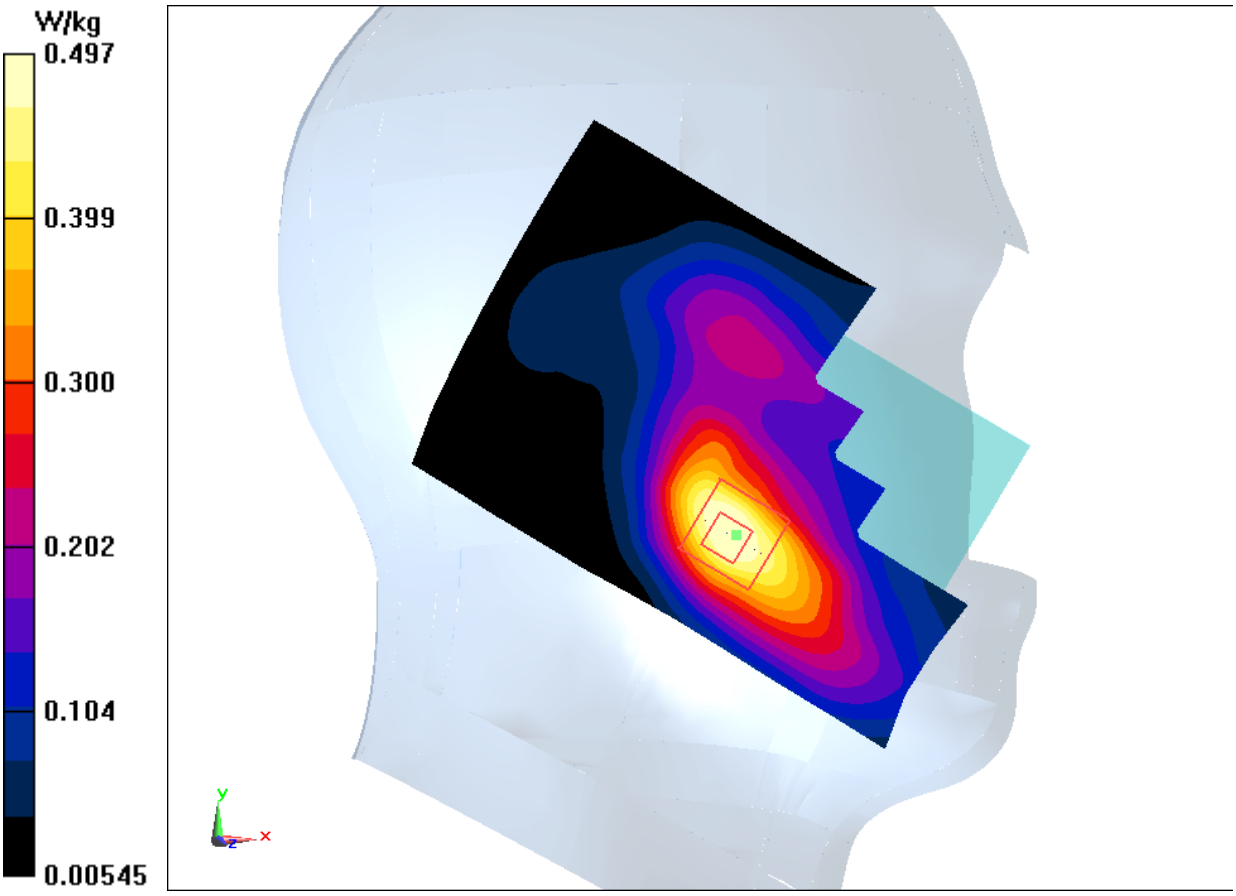

Fig.9 LTE Band2

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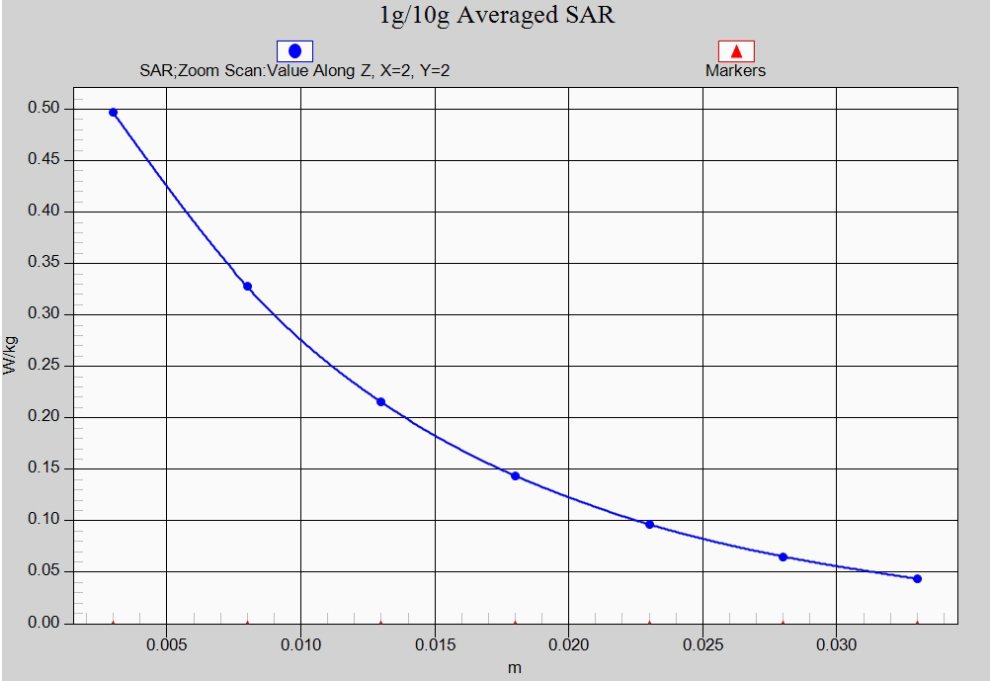

Fig. 9-1 Z-Scan at power reference point (LTE Band2)

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LTE Band2 Body Bottom High with QPSK_20M_1RB_Low

Date: 2016-4-4
Electronics: DAE4 Sn777
Medium: Body 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.568 mho/m; εr = 54.08; ρ = 1000 kg/m^3
Ambient Temperature: 22.9^{o}C Liquid Temperature: 22.5^{o}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) = 1.18 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.64 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 1.76 W/kg
SAR(1 g) = 1.03 W/kg; SAR(10 g) = 0.557 W/kg
Maximum value of SAR (measured) = 1.17 W/kg

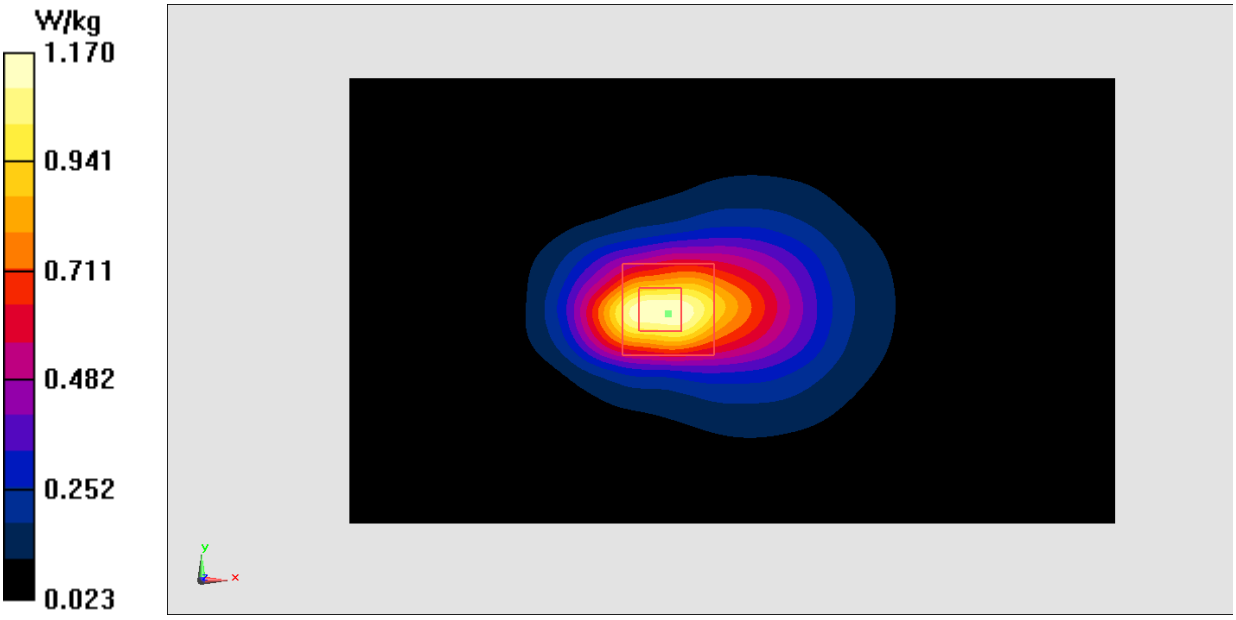

Fig.10 LTE Band2

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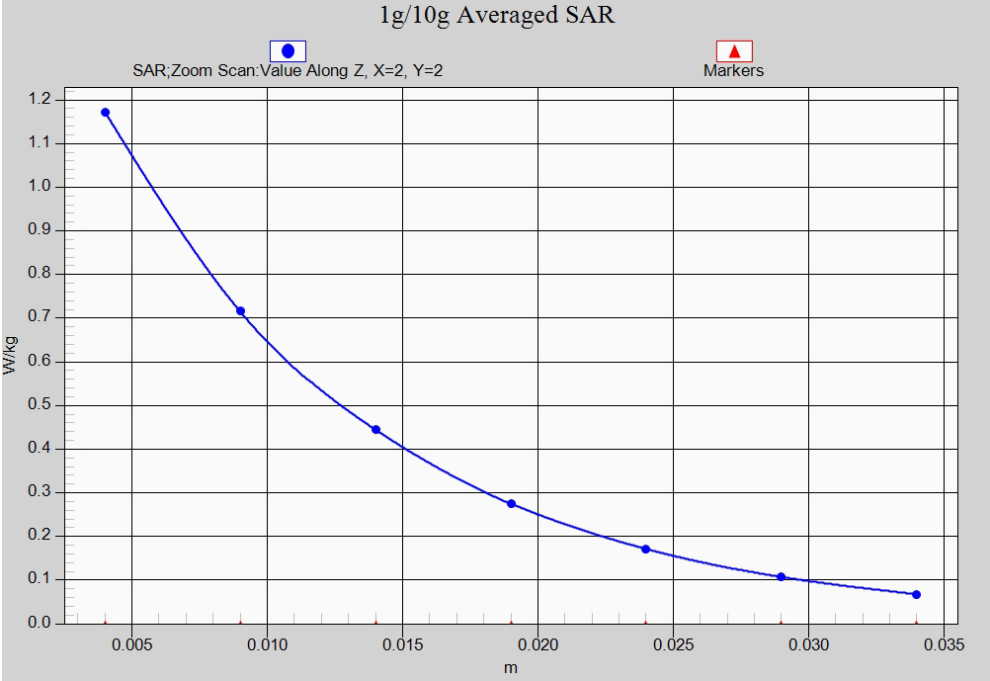

Fig. 10-1 Z-Scan at power reference point (LTE Band2)

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LTE Band4 Left Cheek High with QPSK_20M_1RB_Low

Date: 2016-3-29
Electronics: DAE4 Sn777
Medium: Head 1750 MHz
Medium parameters used: f = 1745 MHz; σ = 1.321 mho/m; εr = 41.33; ρ = 1000 kg/m^3
Ambient Temperature: 22.9^{o}C Liquid Temperature: 22.5^{o}C
Communication System: LTE Band4 Frequency: 1745 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(8.34, 8.34, 8.34)

Area Scan (71x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.248 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.756 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.298 W/kg
SAR(1 g) = 0.198 W/kg; SAR(10 g) = 0.125 W/kg
Maximum value of SAR (measured) = 0.250 W/kg

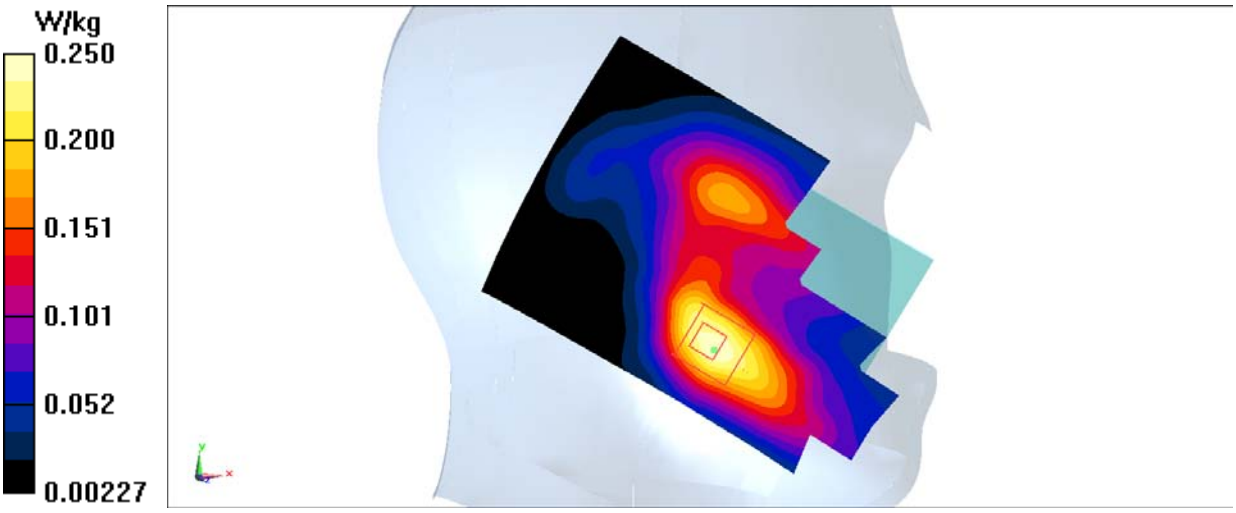

Fig.11 LTE Band4

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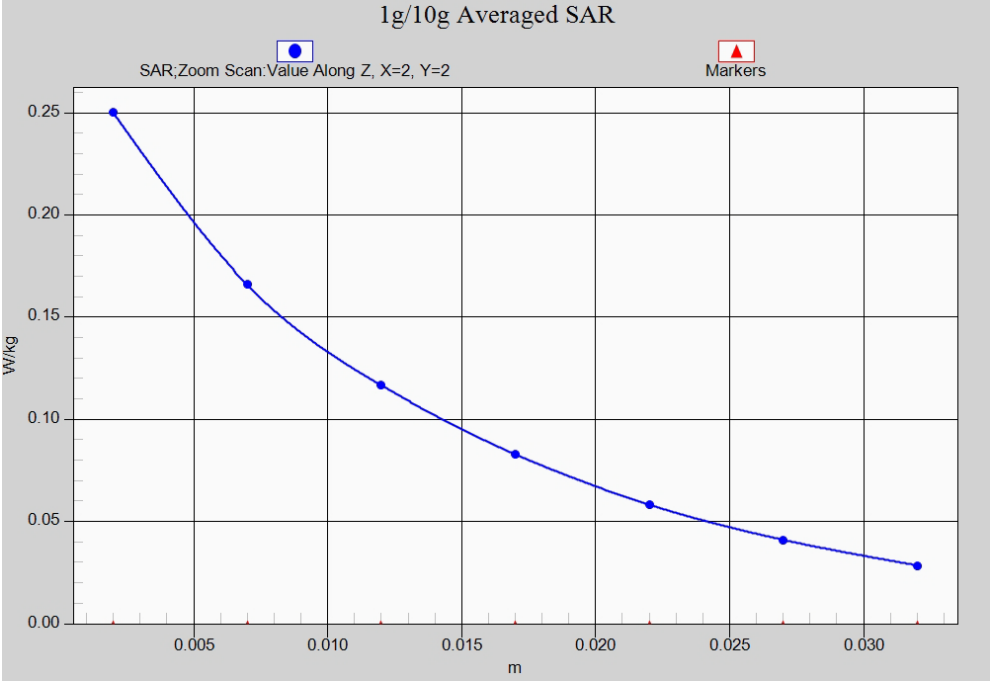

Fig. 11-1 Z-Scan at power reference point (LTE Band4)

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LTE Band4 Body Bottom Low with QPSK_20M_1RB_Low

Date: 2016-3-29
Electronics: DAE4 Sn777
Medium: Body 1750 MHz
Medium parameters used: f = 1720 MHz; σ = 1.425 mho/m; εr = 55.86; ρ = 1000 kg/m^3
Ambient Temperature: 22.9^{o}C Liquid Temperature: 22.5^{o}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) = 1.05 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.55 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 1.63 W/kg
SAR(1 g) = 0.913 W/kg; SAR(10 g) = 0.470 W/kg
Maximum value of SAR (measured) = 1.01 W/kg

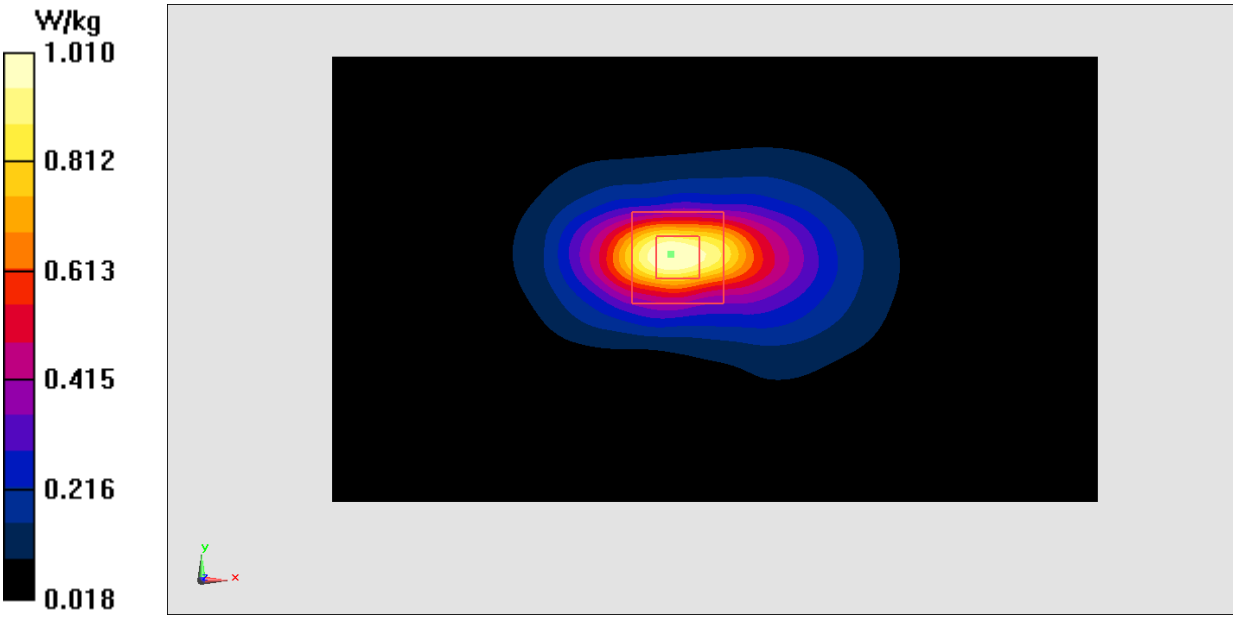

Fig.12 LTE Band4

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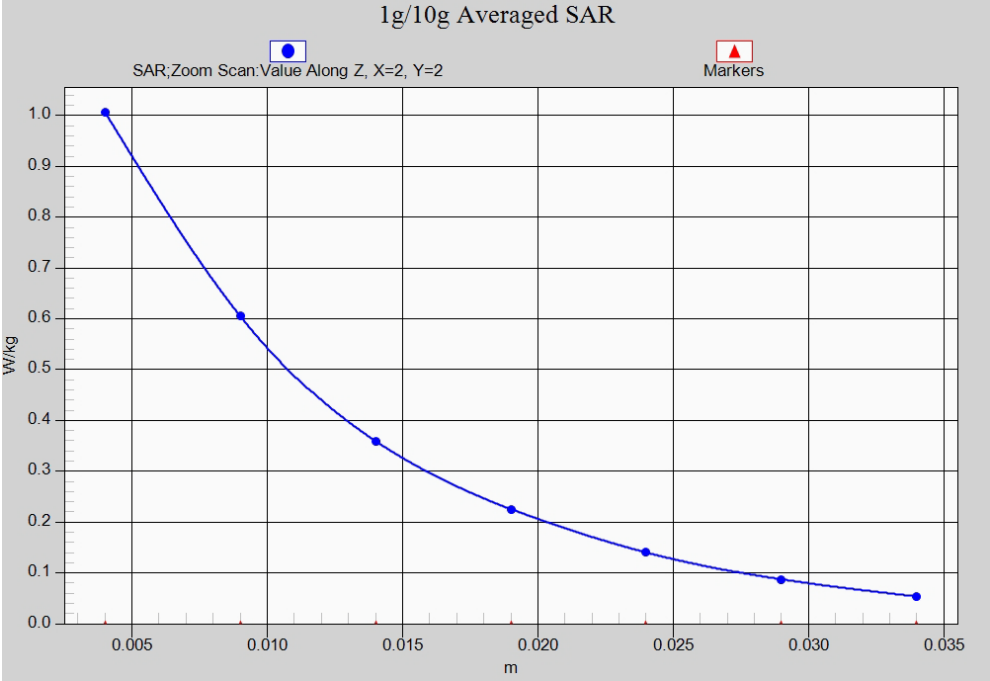

Fig. 12-1 Z-Scan at power reference point (LTE Band4)

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LTE Band7 Left Cheek Middle with QPSK_20M_1RB_Low

Date: 2016-4-1
Electronics: DAE4 Sn777
Medium: Head 2600 MHz
Medium parameters used: f = 2535 MHz; σ = 1.865 mho/m; εr = 39.68; ρ = 1000 kg/m^3
Ambient Temperature: 22.9^{o}C Liquid Temperature: 22.5^{o}C
Communication System: LTE Band7 Frequency: 2535 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(7.21, 7.21, 7.21)

Area Scan (91x141x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.191 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.190 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.274 W/kg
SAR(1 g) = 0.143 W/kg; SAR(10 g) = 0.075 W/kg
Maximum value of SAR (measured) = 0.176 W/kg

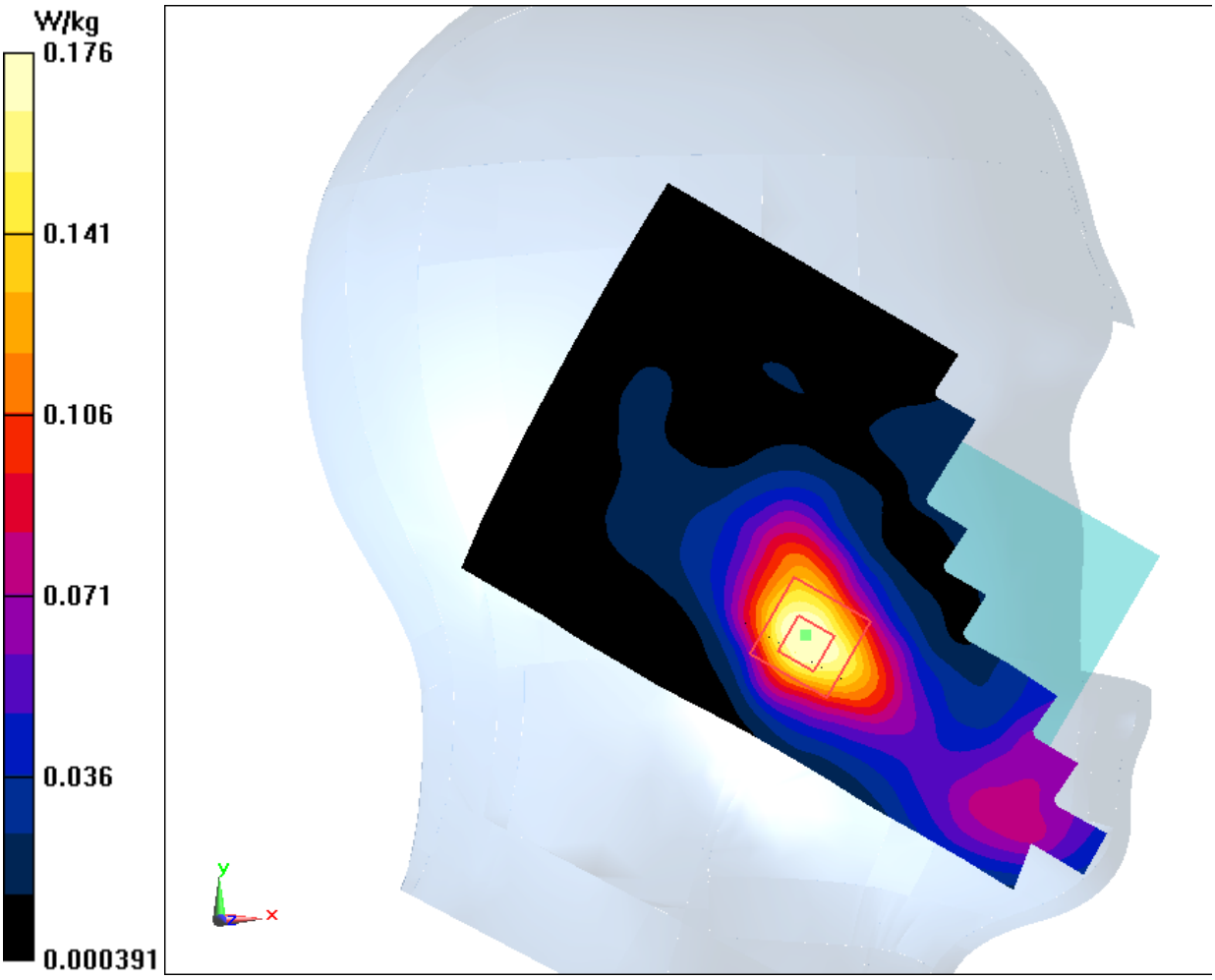

Fig.13 LTE Band7

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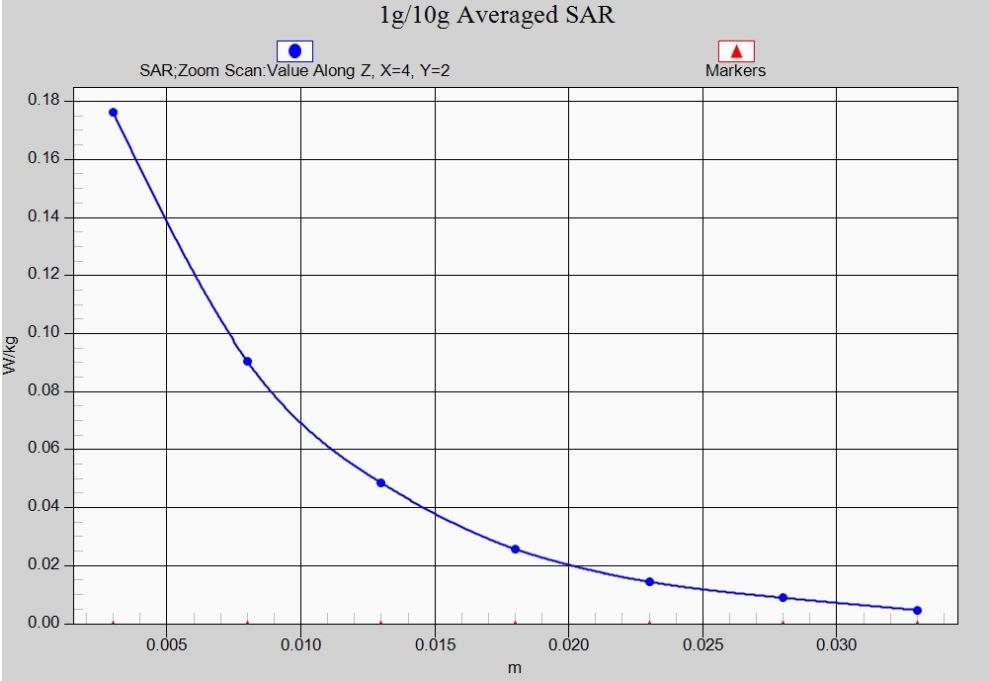

Fig. 13-1 Z-Scan at power reference point (LTE Band7)

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LTE Band7 Body Rear Middle with QPSK_20M_1RB_Low (AP OFF)

Date: 2016-4-1
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^{o}C Liquid Temperature: 22.5^{o}C
Communication System: LTE Band7 Frequency: 2510 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(7.20, 7.20, 7.20)

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.873 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.960 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.715 W/kg; SAR(10 g) = 0.370 W/kg
Maximum value of SAR (measured) = 0.787 W/kg

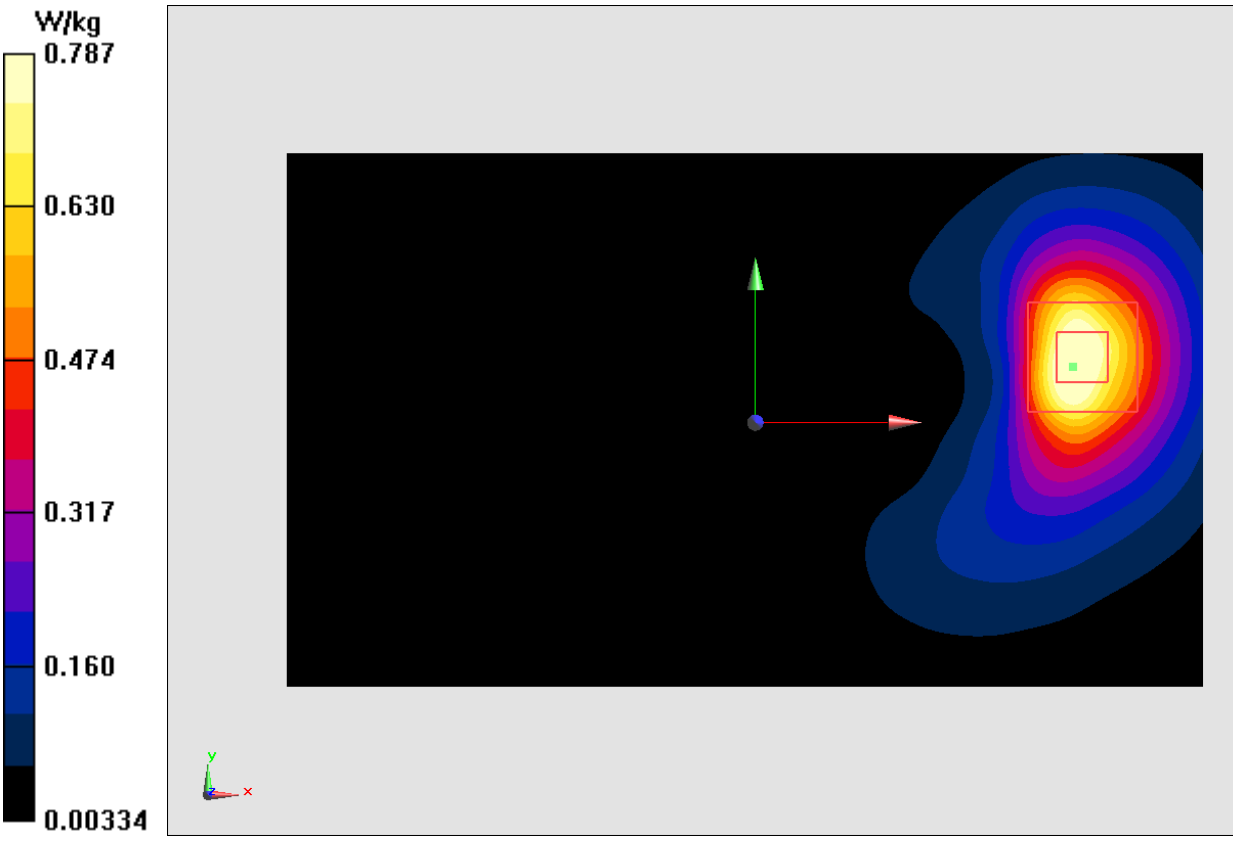

Fig.14 LTE Band7 (AP OFF)

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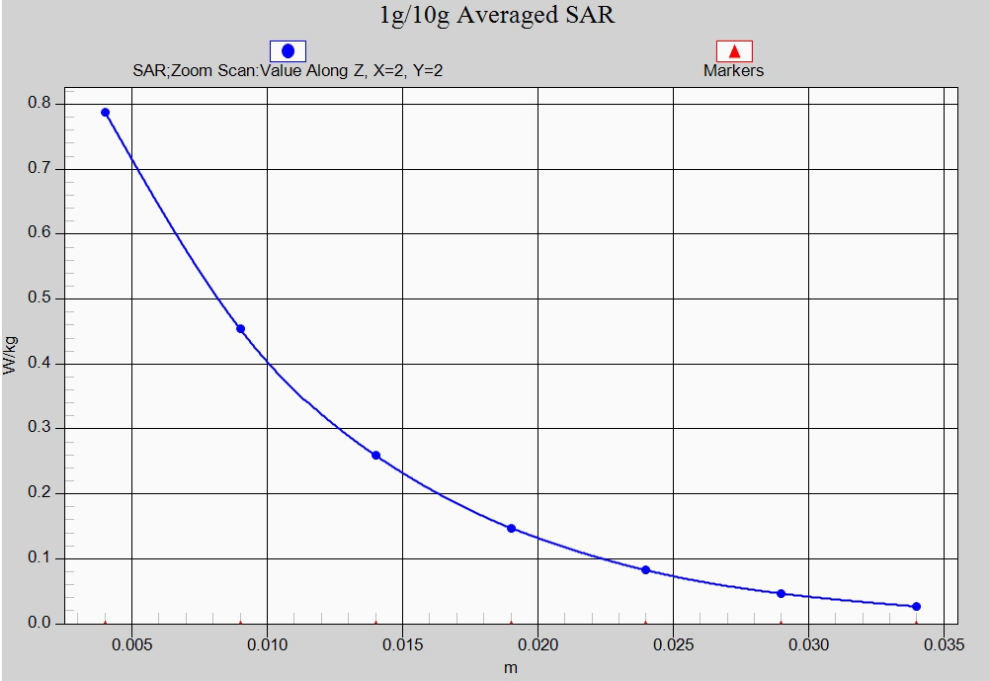

Fig. 14-1 Z-Scan at power reference point (LTE Band7) AP OFF

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LTE Band7 Body Bottom High with QPSK_20M_1RB_Low (AP ON)

Date: 2016-4-1
Electronics: DAE4 Sn777
Medium: Body 2600 MHz
Medium parameters used: f = 2560 MHz; σ = 2.061 mho/m; εr = 51.89; ρ = 1000 kg/m^3
Ambient Temperature: 22.9^{o}C Liquid Temperature: 22.5^{o}C
Communication System: LTE Band7 Frequency: 2560 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(7.20, 7.20, 7.20)

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.27 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.260 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 2.10 W/kg
SAR(1 g) = 1.04 W/kg; SAR(10 g) = 0.456 W/kg
Maximum value of SAR (measured) = 1.22 W/kg

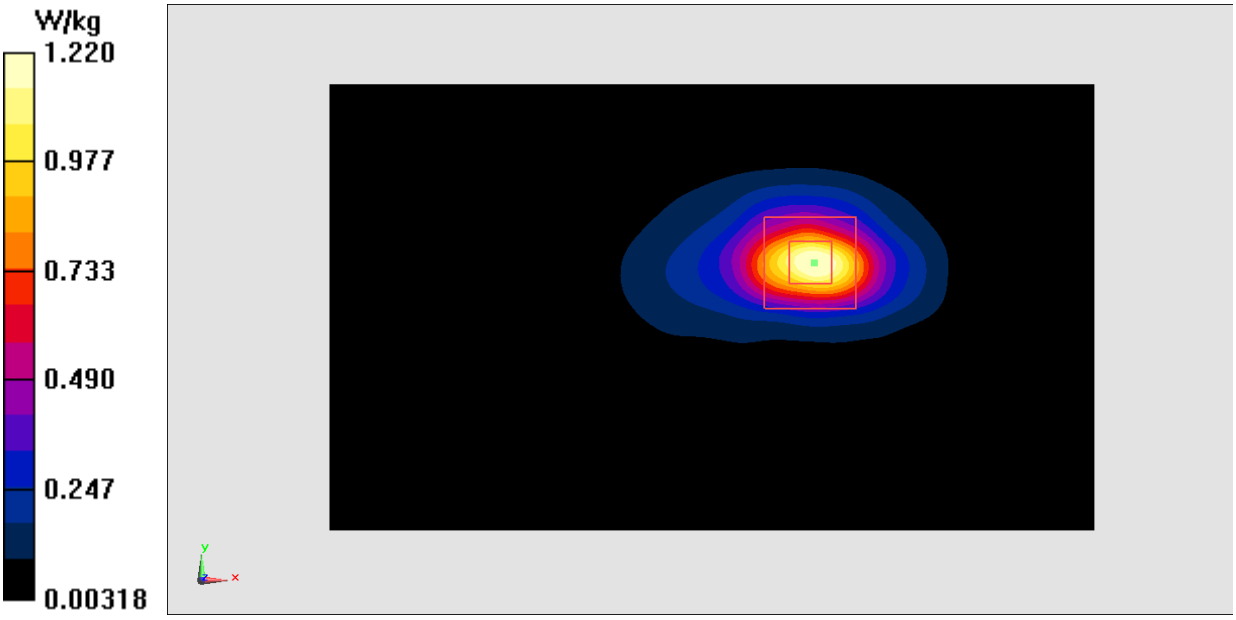

Fig.15 LTE Band7 (AP ON)

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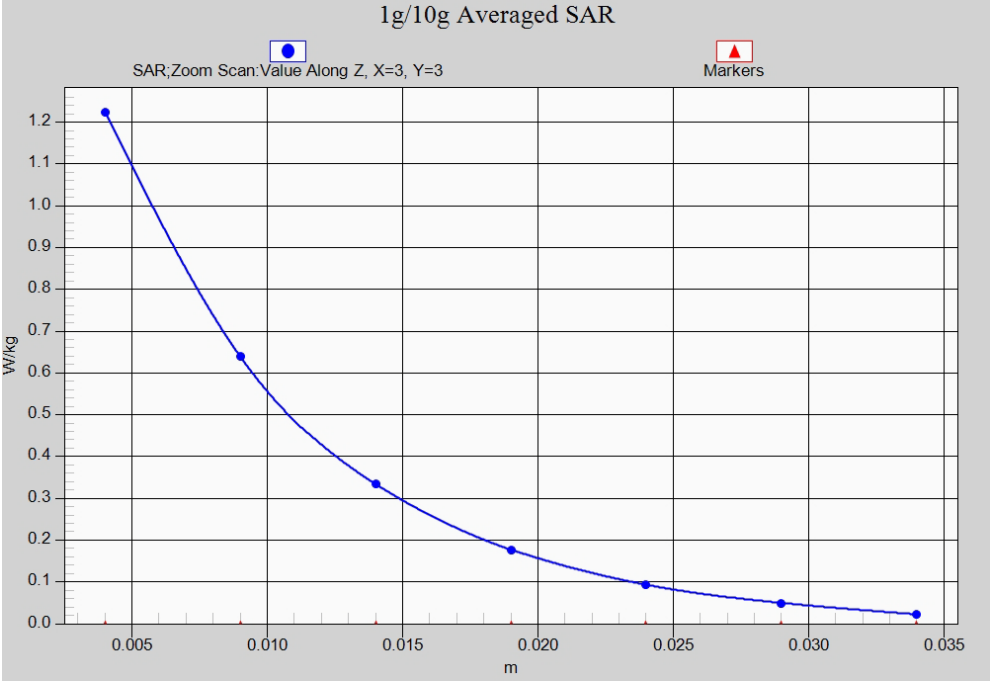

Fig. 15-1 Z-Scan at power reference point (LTE Band7) AP ON

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LTE Band 13 Left Cheek Middle with QPSK_10M_1RB_Low

Date: 2016-4-3
Electronics: DAE4 Sn777
Medium: Head 750 MHz
Medium parameters used (interpolated): f = 782 MHz; σ = 0.921 mho/m; εr = 41.56; ρ = 1000 kg/m^3
Ambient Temperature: 22.2^{o}C Liquid Temperature: 21.7^{o}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) = 0.412 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.861 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.455 W/kg
SAR(1 g) = 0.354 W/kg; SAR(10 g) = 0.271 W/kg
Maximum value of SAR (measured) = 0.396 W/kg

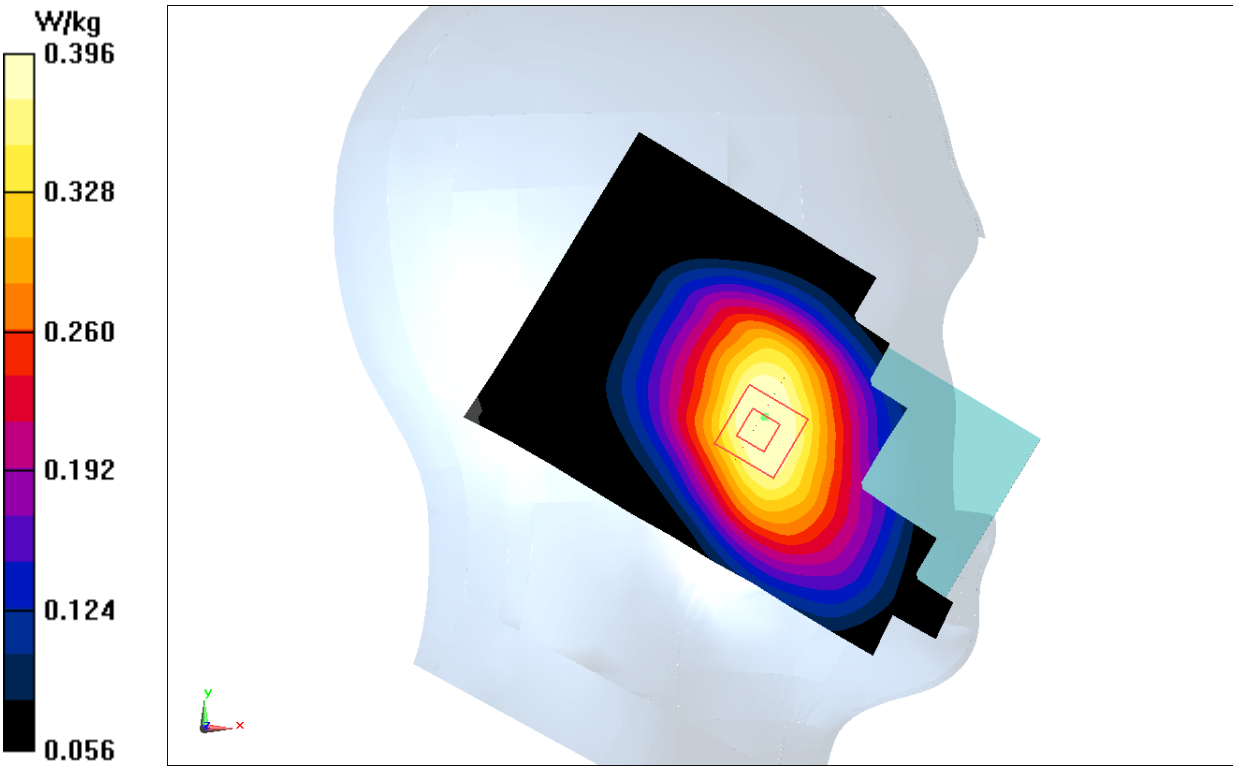

Fig.16 LTE Band 13

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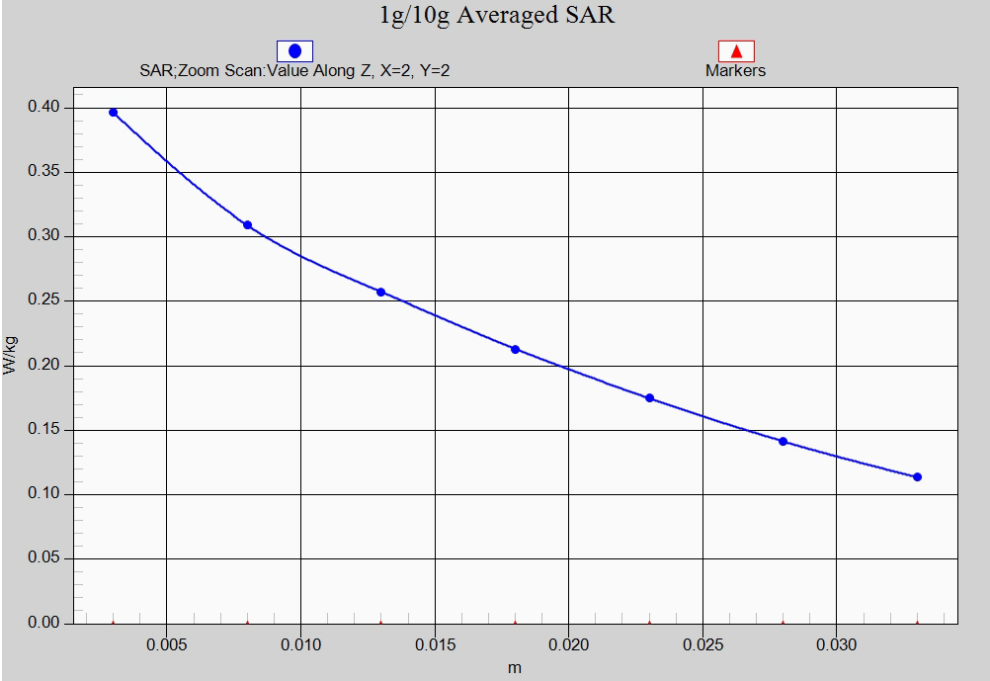

Fig. 16-1 Z-Scan at power reference point (LTE Band13)

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LTE Band 13 Body Rear Middle with QPSK_10M_1RB_Low

Date: 2016-4-3
Electronics: DAE4 Sn777
Medium: Body 750 MHz
Medium parameters used (interpolated): f = 782 MHz; σ = 0.979 mho/m; εr = 54.67; ρ = 1000 kg/m^3
Ambient Temperature: 22.2^{o}C Liquid Temperature: 21.7^{o}C
Communication System: LTE Band13 Frequency: 782 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(9.76, 9.76, 9.76)

Area Scan (131x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.532 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.18 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.624 W/kg
SAR(1 g) = 0.482 W/kg; SAR(10 g) = 0.364 W/kg
Maximum value of SAR (measured) = 0.502 W/kg

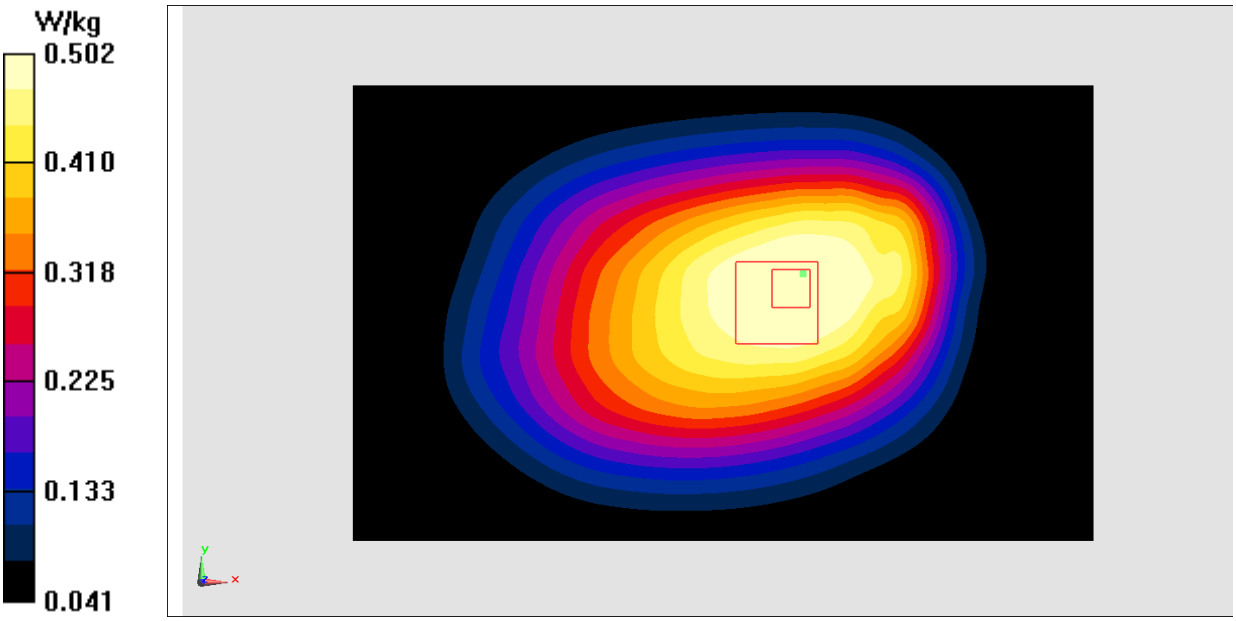

Fig.17 LTE Band 13

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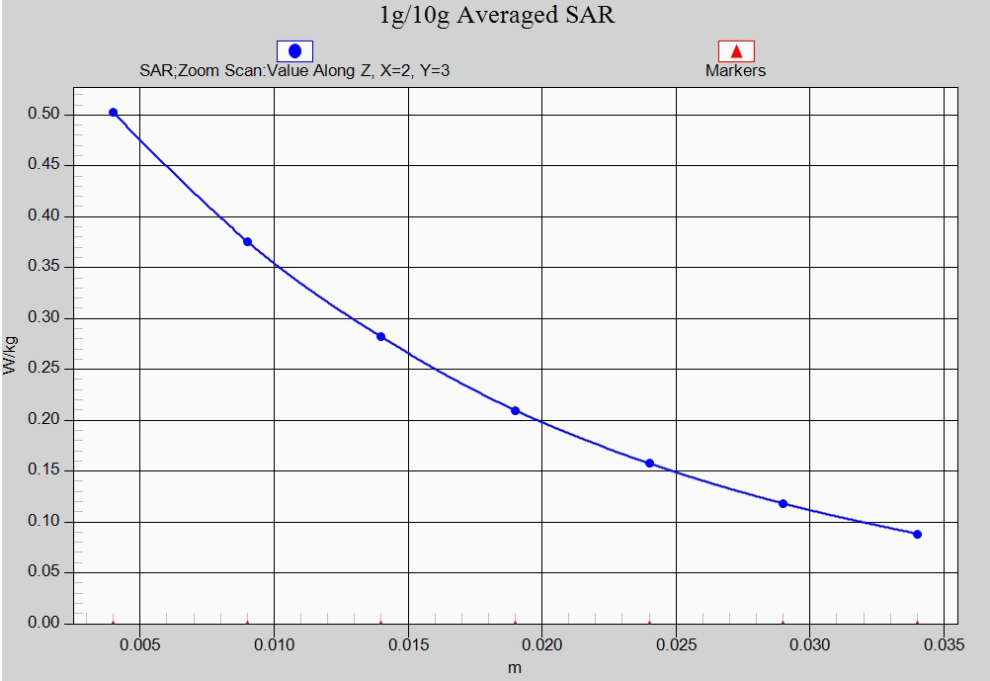

Fig.17-1 Z-Scan at power reference point (LTE Band13)

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LTE Band17 Left Cheek High with QPSK_10M_1RB_High

Date: 2016-4-3
Electronics: DAE4 Sn777
Medium: Head 750 MHz
Medium parameters used (interpolated): f = 711 MHz; σ = 0.881 mho/m; εr = 43.86; ρ = 1000 kg/m^3
Ambient Temperature: 22.9^{o}C Liquid Temperature: 22.5^{o}C
Communication System: LTE Band17 Frequency: 711 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) = 0.205 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.190 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.239 W/kg
SAR(1 g) = 0.194 W/kg; SAR(10 g) = 0.152 W/kg
Maximum value of SAR (measured) = 0.211 W/kg

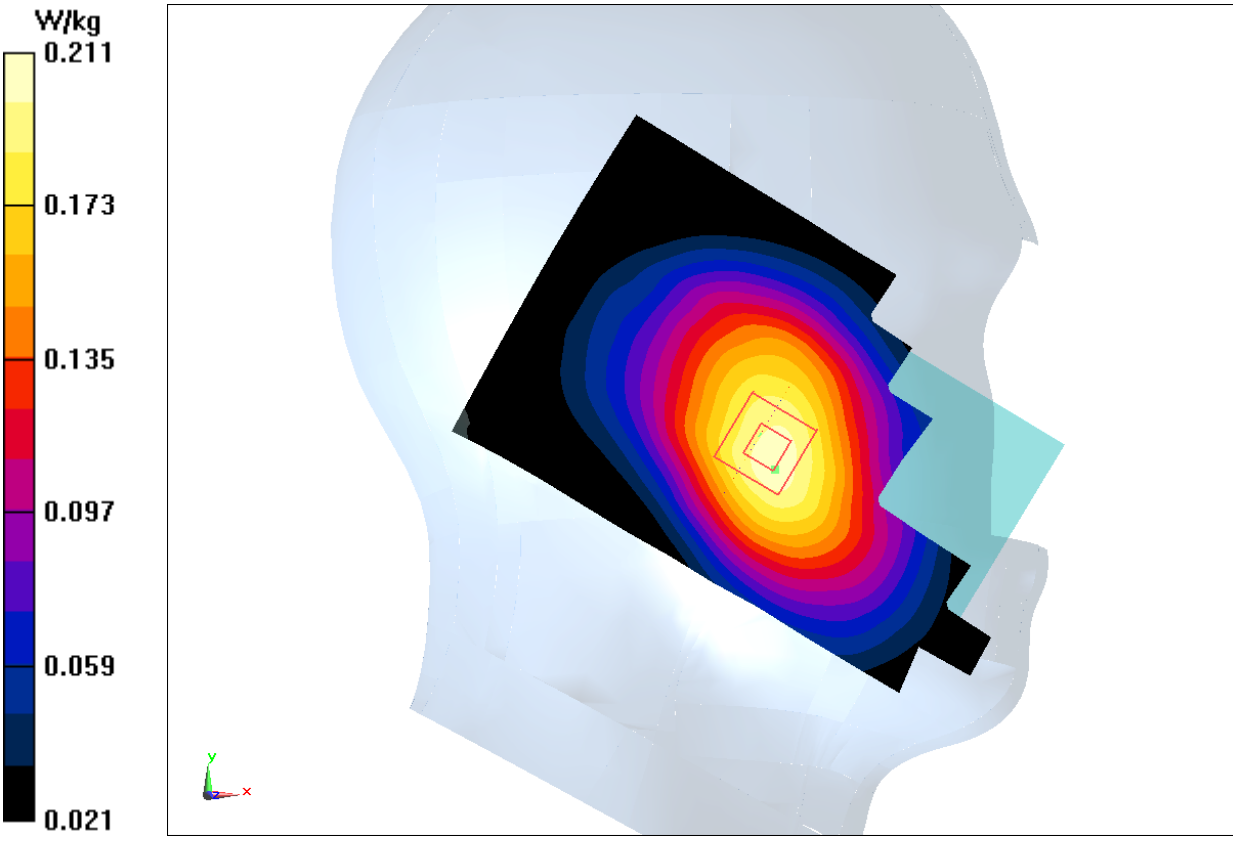

Fig.18 LTE Band17

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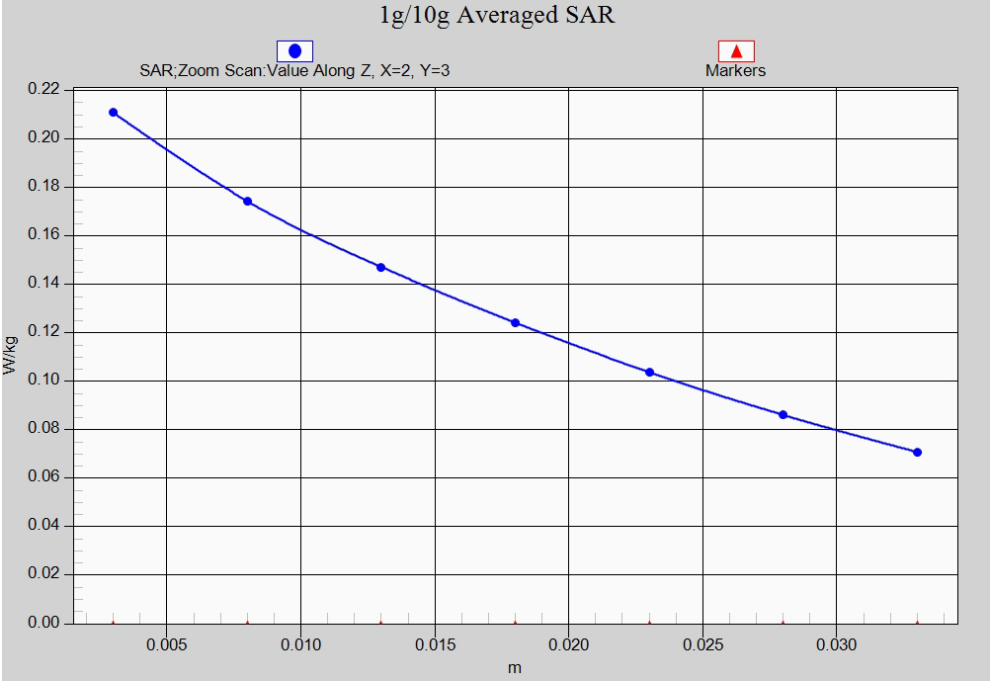

Fig. 18-1 Z-Scan at power reference point (LTE Band17)

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LTE Band17 Body Rear High with QPSK_10M_1RB_High

Date: 2016-4-3
Electronics: DAE4 Sn777
Medium: Body 750 MHz
Medium parameters used (interpolated): f = 711 MHz; σ = 0.925 mho/m; εr = 57.91; ρ = 1000 kg/m^3
Ambient Temperature: 22.9^{o}C Liquid Temperature: 22.5^{o}C
Communication System: LTE Band17 Frequency: 711 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(9.76, 9.76, 9.76)

Area Scan 2 (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.401 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.74 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.501 W/kg
SAR(1 g) = 0.366 W/kg; SAR(10 g) = 0.265 W/kg
Maximum value of SAR (measured) = 0.383 W/kg

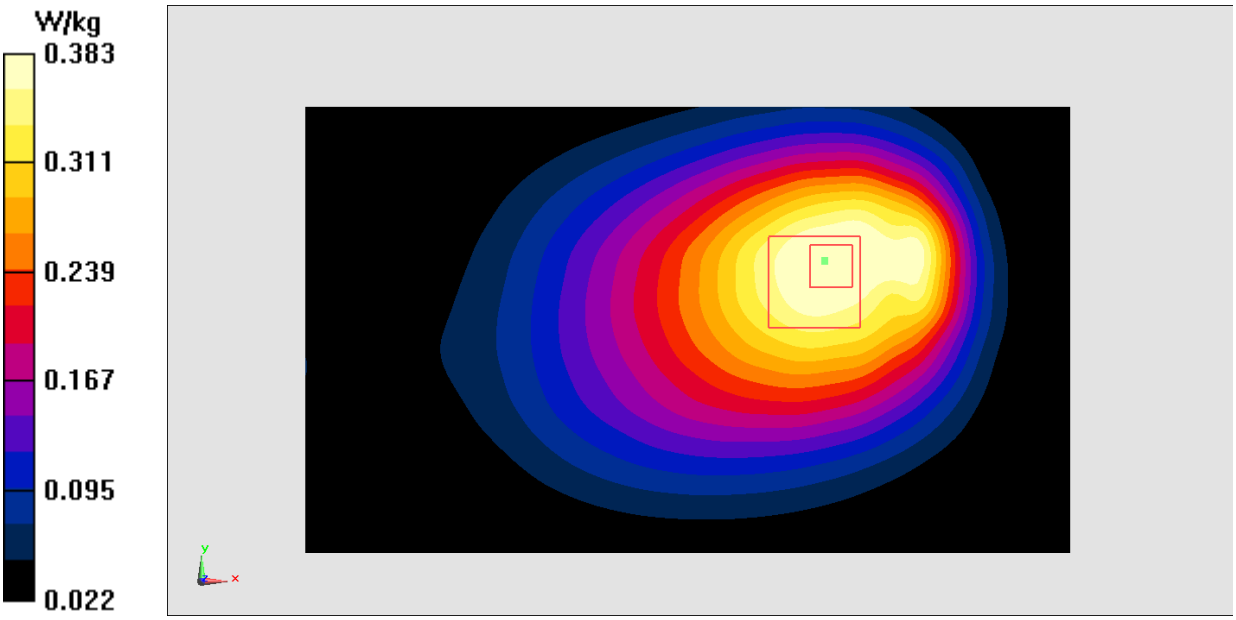

Fig.19 LTE Band17

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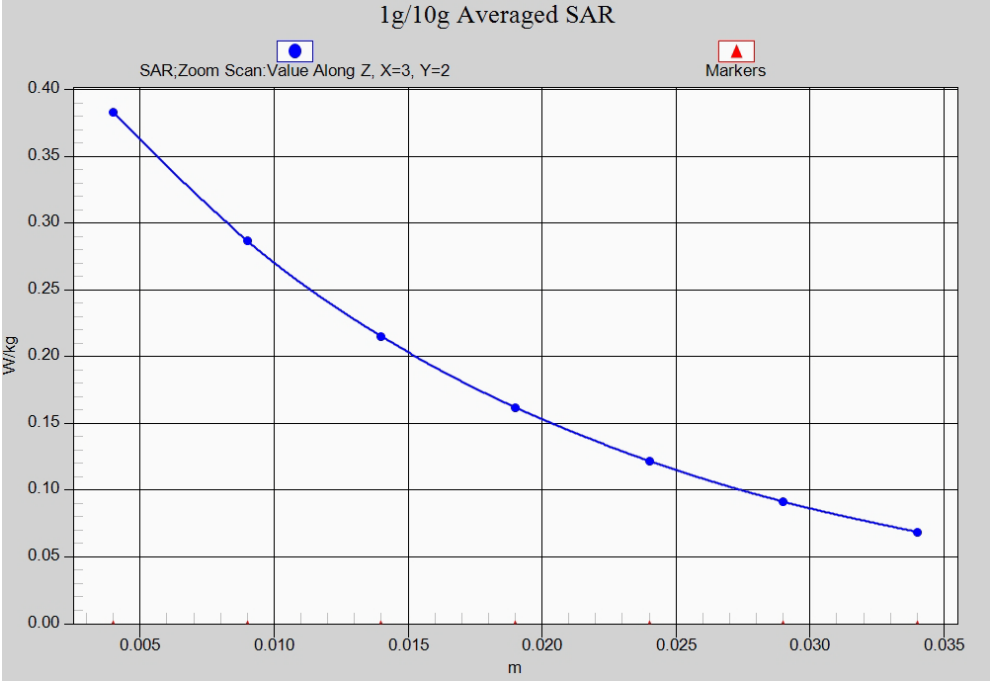

Fig. 19-1 Z-Scan at power reference point (LTE Band17)

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Wifi 802.11b Right Cheek Channel 1

Date: 2016-3-31
Electronics: DAE4 Sn777
Medium: Head 2450 MHz
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.818 mho/m; ε_r = 39.361; ρ = 1000 kg/m^3
Ambient Temperature: 22.9^{o}C Liquid Temperature: 22.5^{o}C
Communication System: WLan 2450 Frequency: 2412 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3617 ConvF(7.24, 7.24, 7.24)

Area Scan (81x141x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.15 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.42 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 1.86 W/kg
SAR(1 g) = 0.832 W/kg; SAR(10 g) = 0.400 W/kg
Maximum value of SAR (measured) = 1.06 W/kg

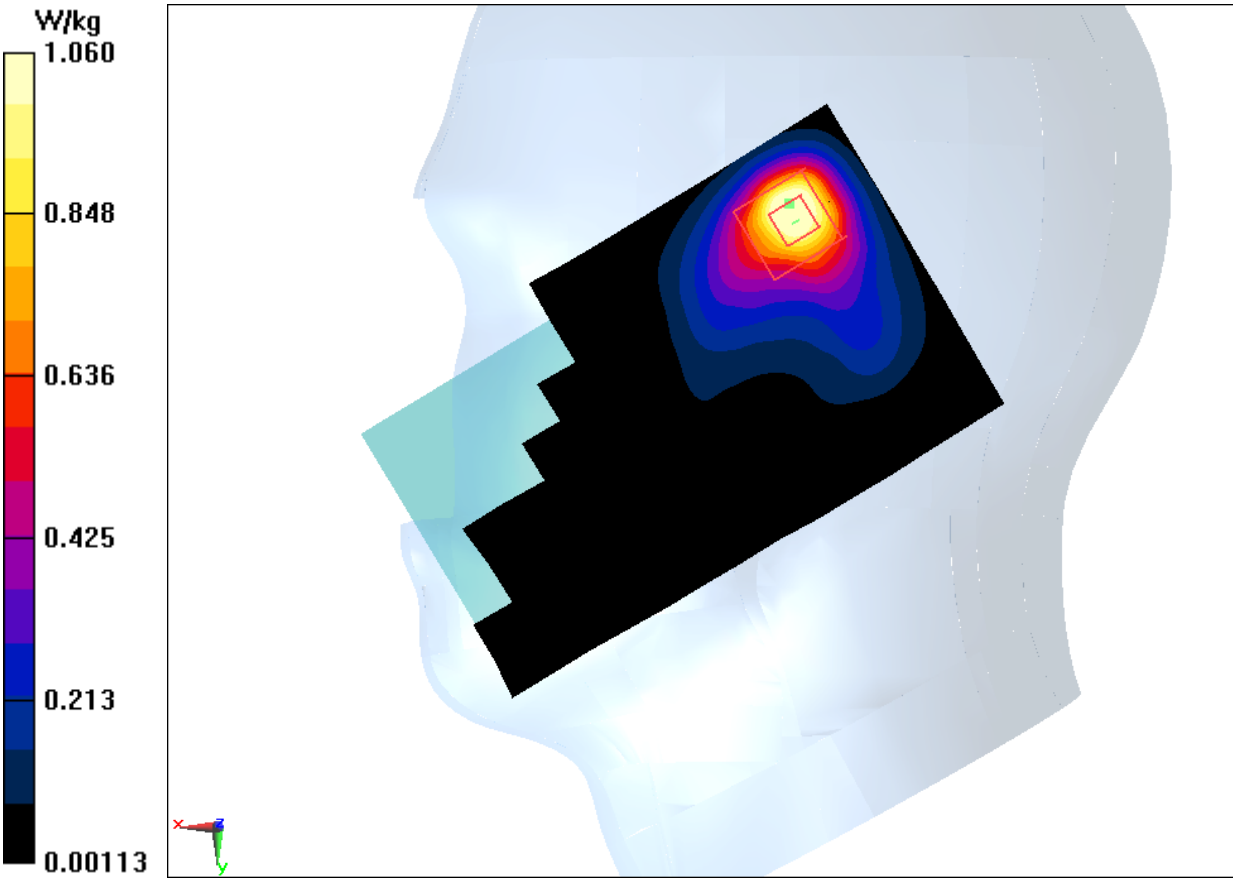

Fig.20 2450 MHz

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