

Table 14.18: SAR Values (WCDMA1900 MHz - Head)

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
1880	9400	Left	Touch	/	22.0	23.7	0.206	0.30	0.360	0.53	-0.17
1880	9400	Left	Tilt	/	22.0	23.7	0.144	0.21	0.286	0.42	-0.07
1880	9400	Right	Touch	/	22.0	23.7	0.138	0.20	0.249	0.37	0.14
1880	9400	Right	Tilt	/	22.0	23.7	0.085	0.13	0.167	0.25	0.10
1907.6	9538	Left	Touch	Fig.9	22.1	23.7	0.234	0.34	0.382	0.55	0.05
1852.4	9262	Left	Touch	/	22.1	23.7	0.177	0.26	0.310	0.45	0.03

Table 14.19: SAR Values (WCDMA1900 MHz Body) -AP ON

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	Front	Fig.10	22.0	23.7	0.249	0.37	0.413	0.61	-0.01
1880	9400	Rear	/	22.0	23.7	0.194	0.29	0.333	0.49	0.03
1880	9400	Left	/	22.0	23.7	0.115	0.17	0.195	0.29	-0.08
1880	9400	Right	/	22.0	23.7	0.098	0.14	0.173	0.26	-0.10
1880	9400	Bottom	/	22.0	23.7	0.210	0.31	0.397	0.59	0.04
1907.6	9538	Front	/	22.1	23.7	0.239	0.35	0.405	0.59	0.18
1852.4	9262	Front	/	22.1	23.7	0.230	0.33	0.394	0.57	0.02

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

Table 14.20: SAR Values (WCDMA1900 MHz -Body) -AP OFF

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	Front	/	22.0	23.7	0.249	0.37	0.413	0.61	-0.01
1880	9400	Rear	/	22.0	23.7	0.194	0.29	0.333	0.49	0.03
1907.6	9538	Front	/	22.1	23.7	0.239	0.35	0.405	0.59	0.18
1852.4	9262	Front	/	22.1	23.7	0.230	0.33	0.394	0.57	0.02

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

Table 14.21: SAR Values (LTE Band 2-Head)

Frequency		Configuration	Test Position	Conduct-ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	Ambient Temperature: 21.5°C		Liquid Temperature: 21.0°C		Power Drift (dB)
MHz	Ch.						Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	
1860	18700	1RB_Mid	Left Touch	22.10	22.5	Fig.11	0.126	0.20	0.207	0.32	-0.11
1860	18700	50RB_Mid	Left Touch	21.03	22	/	0.088	0.12	0.153	0.21	0.06
1860	18700	1RB_Mid	Left Tilt	22.10	22.5	/	0.103	0.10	0.187	0.18	0.07
1860	18700	50RB_Mid	Left Tilt	21.03	22	/	0.072	0.10	0.130	0.18	-0.06
1860	18700	1RB_Mid	Right Touch	22.10	22.5	/	0.108	0.11	0.181	0.18	-0.03
1860	18700	50RB_Mid	Right Touch	21.03	22	/	0.077	0.11	0.130	0.18	0.05
1860	18700	1RB_Mid	Right Tilt	22.10	22.5	/	0.071	0.07	0.132	0.13	0.05
1860	18700	50RB_Mid	Right Tilt	21.03	22	/	0.057	0.08	0.119	0.17	0.08

Table 14.22: SAR Values (LTE Band 2-Body)-AP ON

Frequency		Configuration	Test Position	Conduct-ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	Ambient Temperature: 21.8°C		Liquid Temperature: 21.3°C		Power Drift (dB)
MHz	Ch.						Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	
1860	18700	1RB_Mid	Front	22.10	22.5	Fig.12	0.231	0.25	0.372	0.41	-0.01
1860	18700	50RB_Low	Front	21.03	22	/	0.168	0.21	0.288	0.36	-0.07
1860	18700	1RB_Mid	Rear	22.10	22.5	/	0.203	0.22	0.352	0.39	0.03
1860	18700	50RB_Low	Rear	21.03	22	/	0.146	0.18	0.254	0.32	0.07
1860	18700	1RB_Mid	Left	22.10	22.5	/	0.071	0.08	0.116	0.13	0.08
1860	18700	50RB_Low	Left	21.03	22	/	0.051	0.06	0.084	0.11	-0.10
1860	18700	1RB_Mid	Right	22.10	22.5	/	0.099	0.11	0.168	0.18	-0.11
1860	18700	50RB_Low	Right	21.03	22	/	0.075	0.09	0.124	0.16	-0.80
1860	18700	1RB_Mid	Bottom	22.10	22.5	/	0.185	0.20	0.343	0.38	-0.70
1860	18700	50RB_Low	Bottom	21.03	22	/	0.142	0.18	0.268	0.34	-0.10

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

Table 14.23: SAR Values (LTE Band 2-Body)-AP OFF

Frequency		Configuration	Test Position	Conduct-ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	Ambient Temperature: 21.8°C		Liquid Temperature: 21.3°C		Power Drift (dB)
MHz	Ch.						Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	
1860	18700	1RB_Mid	Front	22.10	22.5	/	0.231	0.25	0.372	0.41	-0.01
1860	18700	50RB_Mid	Front	21.03	22	/	0.168	0.21	0.288	0.36	-0.07
1860	18700	1RB_Mid	Rear	22.10	22.5	/	0.203	0.22	0.352	0.39	0.03
1860	18700	50RB_Mid	Rear	21.03	22	/	0.146	0.18	0.254	0.32	0.07

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

Table 14.24: SAR Values (LTE Band 4-Head)

Frequency		Configuration	Test Position	Conduct-ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	Ambient Temperature: 22.2°C		Liquid Temperature: 21.7°C		Power Drift (dB)
MHz	Ch.						Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	
1745	20300	1RB_Low	Left Touch	22.22	22.5	Fig.13	0.094	0.10	0.142	0.15	-0.04
1745	20300	50RB_Mid	Left Touch	21.16	22	/	0.074	0.09	0.117	0.14	0.02
1745	20300	1RB_Low	Left Tilt	22.22	22.5	/	0.070	0.07	0.124	0.13	0.03
1745	20300	50RB_Mid	Left Tilt	21.16	22	/	0.060	0.07	0.108	0.13	0.09
1745	20300	1RB_Low	Right Touch	22.22	22.5	/	0.089	0.09	0.132	0.13	0.07
1745	20300	50RB_Mid	Right Touch	21.16	22	/	0.070	0.08	0.120	0.15	0.02
1745	20300	1RB_Low	Right Tilt	22.22	22.5	/	0.036	0.04	0.078	0.08	0.05
1745	20300	50RB_Mid	Right Tilt	21.16	22	/	0.028	0.03	0.063	0.08	0.04

Table 14.25: SAR Values (LTE Band 4-Body)–AP ON

Frequency		Configuration	Test Position	Conduct-ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	Ambient Temperature: 21.8°C		Liquid Temperature: 21.3°C		Power Drift (dB)
MHz	Ch.						Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	
1745	20300	1RB_Low	Front	22.22	22.5	/	0.228	0.24	0.428	0.46	-0.04
1745	20300	50RB_Mid	Front	21.16	22	/	0.163	0.20	0.308	0.37	0.02
1745	20300	1RB_Low	Rear	22.22	22.5	/	0.316	0.34	0.584	0.62	0.03
1745	20300	50RB_Mid	Rear	21.16	22	/	0.218	0.26	0.402	0.49	0.09
1745	20300	1RB_Low	Left	22.22	22.5	/	0.056	0.06	0.092	0.10	0.07
1745	20300	50RB_Mid	Left	21.16	22	/	0.046	0.06	0.083	0.10	0.02
1745	20300	1RB_Low	Right	22.22	22.5	/	0.048	0.05	0.080	0.09	0.05
1745	20300	50RB_Mid	Right	21.16	22	/	0.035	0.04	0.071	0.09	0.04
1745	20300	1RB_Low	Bottom	22.22	22.5	Fig.14	0.395	0.42	0.740	0.79	0.04
1745	20300	50RB_Mid	Bottom	21.16	22	/	0.273	0.33	0.525	0.64	0.02

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

Table 14.26: SAR Values (LTE Band 4-Body)–AP OFF

Frequency		Configuration	Test Position	Conduct-ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	Ambient Temperature: 21.8°C		Liquid Temperature: 21.3°C		Power Drift (dB)
MHz	Ch.						Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	
1745	20300	1RB_Low	Front	22.22	22.5	/	0.228	0.24	0.428	0.46	-0.04
1745	20300	50RB_Low	Front	21.16	22	/	0.163	0.20	0.308	0.37	0.02
1745	20300	1RB_Low	Rear	22.22	22.5	/	0.316	0.34	0.584	0.62	0.03
1745	20300	50RB_Low	Rear	21.16	22	/	0.218	0.26	0.402	0.49	0.09

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

Table 14.27: SAR Values (LTE Band 5-Head)

Frequency		Configuration	Test Position	Conduct-ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	Ambient Temperature: 22.0°C		Liquid Temperature: 21.5°C		Power Drift (dB)
MHz	Ch.						Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	
844	20600	1RB_Mid	Left Touch	22.46	22.5	Fig.15	0.140	0.14	0.185	0.19	-0.07
844	20600	25RB_Mid	Left Touch	21.41	22	/	0.090	0.10	0.133	0.15	0.06
844	20600	1RB_Mid	Left Tilt	22.46	22.5	/	0.085	0.09	0.124	0.13	0.05
844	20600	25RB_Mid	Left Tilt	21.41	22	/	0.062	0.07	0.089	0.10	0.03
844	20600	1RB_Mid	Right Touch	22.46	22.5	/	0.078	0.08	0.116	0.12	-0.07
844	20600	25RB_Mid	Right Touch	21.41	22	/	0.058	0.07	0.086	0.10	0.07
844	20600	1RB_Mid	Right Tilt	22.46	22.5	/	0.036	0.04	0.055	0.06	0.08
844	20600	25RB_Mid	Right Tilt	21.41	22	/	0.025	0.03	0.040	0.05	0.13

Table 14.28: SAR Values (LTE Band 5-Body) -AP ON

Frequency		Configuration	Test Position	Conduct-ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	Ambient Temperature: 22.4°C		Liquid Temperature: 21.9°C		Power Drift (dB)
MHz	Ch.						Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	
844	20600	1RB_Mid	Front	22.46	22.5	/	0.065	0.07	0.084	0.08	0.11
844	20600	25RB_Mid	Front	21.41	22	/	0.045	0.05	0.065	0.07	0.06
844	20600	1RB_Mid	Rear	22.46	22.5	Fig.16	0.080	0.08	0.109	0.11	0.18
844	20600	25RB_Mid	Rear	21.41	22	/	0.061	0.07	0.089	0.10	0.04
844	20600	1RB_Mid	Left	22.46	22.5	/	0.074	0.07	0.104	0.10	0.19
844	20600	25RB_Mid	Left	21.41	22	/	0.039	0.04	0.057	0.07	-0.10
844	20600	1RB_Mid	Right	22.46	22.5	/	0.068	0.07	0.101	0.10	-0.04
844	20600	25RB_Mid	Right	21.41	22	/	0.049	0.06	0.072	0.08	0.03
844	20600	1RB_Mid	Bottom	22.46	22.5	/	0.006	0.01	0.012	0.01	0.17
844	20600	25RB_Mid	Bottom	21.41	22	/	0.003	<0.01	0.007	0.01	-0.18

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

Table 14.29: SAR Values (LTE Band 5-Body) -AP OFF

Frequency		Configuration	Test Position	Conduct-ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	Ambient Temperature: 22.4°C		Liquid Temperature: 21.9°C		Power Drift (dB)
MHz	Ch.						Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	
844	20600	1RB_Mid	Front	22.46	22.5	/	0.065	0.07	0.084	0.08	0.11
844	20600	25RB_Mid	Front	21.41	22	/	0.045	0.05	0.065	0.07	0.06
844	20600	1RB_Mid	Rear	22.46	22.5	/	0.080	0.08	0.109	0.11	0.18
844	20600	25RB_Mid	Rear	21.41	22	/	0.061	0.07	0.089	0.10	0.04

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

Table 14.30: SAR Values (LTE Band 7-Head)

Frequency		Configuration	Test Position	Conduct-ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	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_High	Left Touch	22.47	22.5	Fig.17	0.284	0.29	0.545	0.55	0.09
2535	21100	50RB_High	Left Touch	21.61	22	/	0.260	0.28	0.494	0.54	0.05
2560	21350	1RB_High	Left Tilt	22.47	22.5	/	0.122	0.12	0.244	0.25	0.06
2535	21100	50RB_High	Left Tilt	21.61	22	/	0.091	0.10	0.181	0.20	0.07
2560	21350	1RB_High	Right Touch	22.47	22.5	/	0.176	0.18	0.355	0.36	0.03
2535	21100	50RB_High	Right Touch	21.61	22	/	0.133	0.15	0.267	0.29	0.08
2560	21350	1RB_High	Right Tilt	22.47	22.5	/	0.070	0.07	0.150	0.15	0.01
2535	21100	50RB_High	Right Tilt	21.61	22	/	0.065	0.07	0.139	0.15	0.05

Table 14.31: SAR Values (LTE Band 7-Body) -AP ON

Frequency		Configuration	Test Position	Conduct-ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	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_High	Front	22.47	22.5	/	0.405	0.41	0.738	0.74	0.03
2535	21100	50RB_High	Front	21.61	22	/	0.033	0.04	0.589	0.64	0.13
2560	21350	1RB_High	Rear	22.47	22.5	Fig.18	0.432	0.43	0.815	0.82	0.06
2535	21100	1RB_High	Rear	22.29	22.5	/	0.403	0.42	0.775	0.81	0.14
2510	20850	1RB_High	Rear	22.21	22.5	/	0.397	0.42	0.760	0.81	0.05
2535	21100	50RB_High	Rear	21.61	22	/	0.396	0.43	0.726	0.79	0.11
2560	21350	100RB_High	Rear	21.54	22	/	0.341	0.38	0.665	0.74	0.12
2560	21350	1RB_High	Left	22.47	22.5	/	0.253	0.25	0.448	0.45	0.06
2535	21100	50RB_High	Left	21.61	22	/	0.183	0.20	0.382	0.42	0.08
2560	21350	1RB_High	Right	22.47	22.5	/	0.090	0.09	0.158	0.16	-0.07
2535	21100	50RB_High	Right	21.61	22	/	0.073	0.08	0.121	0.13	0.03
2560	21350	1RB_High	Bottom	22.47	22.5	/	0.325	0.33	0.676	0.68	-0.06
2535	21100	50RB_High	Bottom	21.61	22	/	0.265	0.29	0.550	0.60	-0.11

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

Table 14.32: SAR Values (LTE Band 7-Body) -AP OFF

Frequency		Configuration	Test Position	Conduct-ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	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_High	Front	22.47	22.5	/	0.405	0.41	0.738	0.74	0.03
2535	21100	50RB_High	Front	21.61	22	/	0.033	0.04	0.589	0.64	0.13
2560	21350	1RB_High	Rear	22.47	22.5	/	0.432	0.43	0.815	0.82	0.06
2535	21100	1RB_High	Rear	22.29	22.5	/	0.403	0.42	0.775	0.81	0.14
2510	20850	1RB_High	Rear	22.21	22.5	/	0.397	0.42	0.760	0.81	0.05
2535	21100	50RB_High	Rear	21.61	22	/	0.396	0.43	0.726	0.79	0.11
2560	21350	100RB_High	Rear	21.54	22	/	0.341	0.38	0.665	0.74	0.12

Table 14.33: SAR Values (WLAN 2.4G- Head) for other batteries

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
2462	11	Right	Touch	/	16.23	17.5	0.279	0.37	0.618	0.83	-0.10

Table 14.34: SAR Values (WCDMA1700 MHz -Body) for other batteries

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.									
1712.4	1312	Rear	/	23.26	23.5	0.552	0.58	1.14	1.20	0.05

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

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 14.35: SAR Values (GSM 850 MHz - Head)

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
848.8	251	Right	Touch	Fig.1	31.55	33.5	0.203	0.32	0.264	0.41	0.08

Table 14.36: SAR Values (GSM 850 MHz -Body) –AP ON

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.									
848.8	251	Rear	Fig.2	27.44	28.5	0.414	0.53	0.541	0.69	-0.04

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

Table 14.37: SAR Values (GSM 1900 MHz - Head)

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
1909.8	810	Left	Touch	Fig.3	29.96	30.5	0.099	0.11	0.158	0.18	0.07

Table 14.38: SAR Values (GSM 1900 MHz -Body) –AP ON

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.									
1909.8	810	Rear	Fig.4	24.44	25.5	0.205	0.26	0.326	0.42	0.19

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

Table 14.39: SAR Values (WCDMA 850 MHz - Head)

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
846.6	4233	Left	Touch	Fig.5	22.7	24	0.148	0.20	0.195	0.26	0.11

Table 14.40: SAR Values (WCDMA 850 MHz -Body) –AP ON

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.									
846.6	4233	Rear	Fig.6	22.7	24	0.165	0.22	0.212	0.29	0.08

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

Table 14.41: SAR Values (WCDMA1700 MHz - Head)

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
1752.6	1513	Left	Touch	Fig.7	23.15	23.5	0.152	0.16	0.228	0.25	0.15

Table 14.42: SAR Values (WCDMA1700 MHz -Body) –AP ON

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.									
1712.4	1312	Rear	Fig.8	23.26	23.5	0.662	0.70	1.250	1.32	0.11

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

Table 14.43: SAR Values (WCDMA1900 MHz - Head)

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
1907.6	9538	Left	Touch	Fig.9	22.1	23.7	0.234	0.34	0.382	0.55	0.05

Table 14.44: SAR Values (WCDMA1900 MHz -Body) –AP ON

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	Front	Fig.10	22.0	23.7	0.249	0.37	0.413	0.61	-0.01

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

Table 14.45: SAR Values (LTE Band 2-Head)

Frequency		Configuration	Test Position	Conduct -ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	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.										
1860	18700	1RB_Mid	Left Touch	22.10	22.5	Fig.11	0.126	0.20	0.207	0.32	-0.11

Table 14.46: SAR Values (LTE Band 2-Body) -AP ON

Frequency		Configuration	Test Position	Conduct -ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	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.										
1860	18700	1RB_Mid	Front	22.10	22.5	Fig.12	0.231	0.25	0.372	0.41	-0.01

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

Table 14.47: SAR Values (LTE Band 4-Head)

Frequency		Configuration	Test Position	Conduct -ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	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	22.22	22.5	Fig.13	0.094	0.10	0.142	0.15	-0.04

Table 14.48: SAR Values (LTE Band 4-Body) -AP ON

Frequency		Configuration	Test Position	Conduct -ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	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	Bottom	22.22	22.5	Fig.14	0.395	0.42	0.740	0.79	0.04

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

Table 14.49: SAR Values (LTE Band 5-Head)

Frequency	Configuration	Test	Conduct	Max.	Figure	Measured	Reported	Measured	Reported	Power
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MHz	Ch.		Position	Conduct- ed Power (dBm)	Max. tune-up Power (dBm)	No.	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
844	20600	1RB_Mid	Left Touch	22.46	22.5	Fig.15	0.140	0.14	0.185	0.19	-0.07

Table 14.50: SAR Values (LTE Band 5-Body) -AP ON

Frequency		Configuration	Test Position	Conduct- ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	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.										
844	20600	1RB_Mid	Rear	22.46	22.5	Fig.16	0.080	0.08	0.109	0.11	0.18

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

Table 14.51: SAR Values (LTE Band 7-Head)

Frequency		Configuration	Test Position	Conduct- ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	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_High	Left Touch	22.47	22.5	Fig.17	0.284	0.29	0.545	0.55	0.09

Table 14.52: SAR Values (LTE Band 7-Body) -AP ON

Frequency		Configuration	Test Position	Conduct- ed Power (dBm)	Max. tune-up Power (dBm)	Figure No.	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_High	Rear	22.47	22.5	Fig.18	0.432	0.43	0.815	0.82	0.06

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

14.4 WLAN Evaluation For 2.4G

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

Head Evaluation

Table 14.53: SAR Values (WLAN - Head)– 802.11b 11Mbps (Fast SAR)

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
2462	11	Left	Touch	/	16.23	17.5	0.166	0.22	0.318	0.43	0.12
2462	11	Left	Tilt	/	16.23	17.5	0.179	0.24	0.362	0.48	-0.05
2462	11	Right	Touch	/	16.23	17.5	0.291	0.39	0.635	0.85	-0.12
2462	11	Right	Tilt	/	16.23	17.5	0.277	0.37	0.581	0.78	-0.04

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

Table 14.54: SAR Values (WLAN - Head) – 802.11b 11Mbps (Full SAR)

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
2462	11	Left	Touch	/	16.23	17.5	0.164	0.22	0.314	0.42	0.08
2462	11	Left	Tilt	/	16.23	17.5	0.177	0.24	0.357	0.48	-0.11
2462	11	Right	Touch	Fig.19	16.23	17.5	0.294	0.39	0.639	0.86	-0.10
2462	11	Right	Tilt	/	16.23	17.5	0.281	0.38	0.583	0.78	-0.58
2412	1	Right	Touch	/	16.13	17.5	0.273	0.37	0.567	0.78	0.02

Note1: When the reported SAR of the initial test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position using subsequent highest estimated 1-g SAR conditions determined by area scans, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg.

Note2: For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.

According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit. A maximum transmission duty factor of 97.5% is achievable for WLAN in this project and the scaled reported SAR is presented as below.

Table 14.55: SAR Values (WLAN - Head) – 802.11b 11Mbps (Scaled Reported SAR)

Frequency		Side	Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
MHz	Ch.						
2462	11	Right	Touch	97.5%	100%	0.86	0.88

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

Body Evaluation

Table 14.56: SAR Values (WLAN - Body)– 802.11b 11Mbps (Fast SAR)-AP ON

Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.									
2462	11	Front	/	16.23	17.5	0.050	0.07	0.096	0.13	0.13
2462	11	Rear	/	16.23	17.5	0.070	0.09	0.142	0.19	0.12
2462	11	Left	/	16.23	17.5	0.032	0.04	0.076	0.10	-0.13
2462	11	Top	/	16.23	17.5	0.062	0.08	0.135	0.18	-0.03

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

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

Table 14.57: SAR Values (WLAN - Body) – 802.11b 11Mbps (Full SAR)

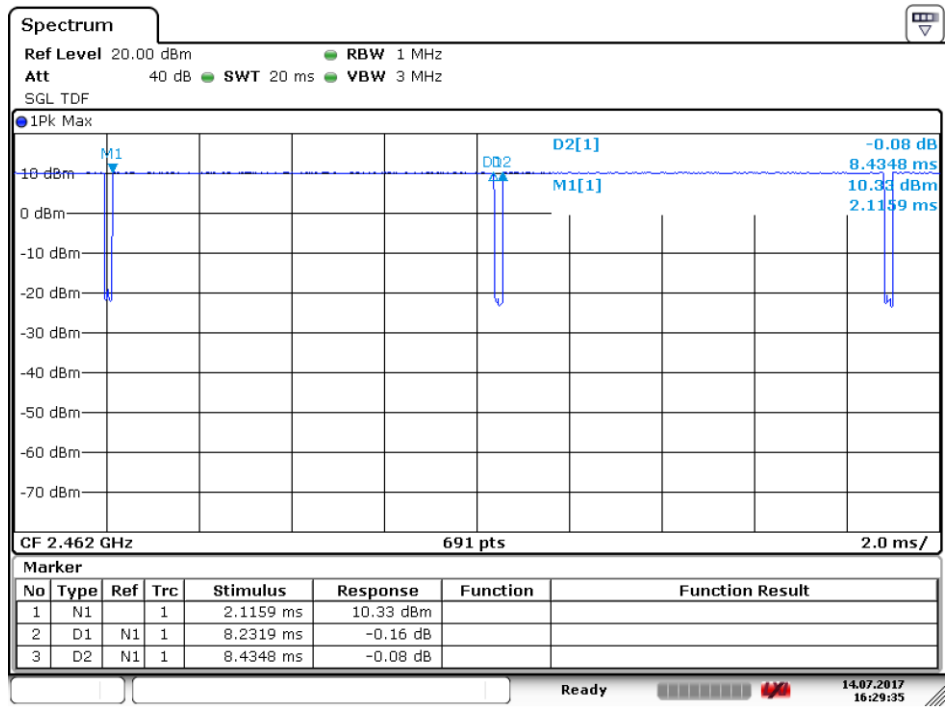
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.									
2462	11	Rear	Fig.20	16.23	17.5	0.073	0.10	0.149	0.20	0.16

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. A maximum transmission duty factor of 97.5% is achievable for WLAN in this project and the scaled reported SAR is presented as below.

Table 14.58: SAR Values (WLAN - Body) – 802.11b 11Mbps (Scaled Reported SAR)

Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
MHz	Ch.					
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C						
2462	11	Rear	97.5%	100%	0.20	0.21

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



Date: 14.JUL.2017 16:29:35

Picture 14.1: The plot of duty factor

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 WCDMA 1700 (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.						
1712.4	1312	Rear	10	1.250	1.23	1.01	/

Table 15.4: SAR Measurement Variability for Body LTE Band 7 (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	Rear	10	0.815	0.810	1.006	/

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	12	N	2	1	1	6.0	6.0	∞
2	Isotropy	B	7.4	R	$\sqrt{3}$	1	1	4.3	4.3	∞
3	Boundary effect	B	1.1	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	1.0	N	1	1	1	1.0	1.0	∞
7	Response time	B	0.0	R	$\sqrt{3}$	1	1	0.0	0.0	∞
8	Integration time	B	1.7	R	$\sqrt{3}$	1	1	1.0	1.0	∞
9	RF ambient conditions-noise	B	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
10	RF ambient conditions-reflection	B	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
11	Probe positioned mech. restrictions	B	0.35	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	5
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	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
18	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
19	Liquid conductivity (meas.)	A	1.3	N	1	0.64	0.43	0.83	0.56	9
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	0.96	0.78	9
Combined standard uncertainty								10.4	10.3	95.5
Expanded uncertainty (Confidence interval of 95 %)								20.8	20.6	

16.2 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	12	N	2	1	1	6.0	6.0	∞
2	Isotropy	B	7.4	R	$\sqrt{3}$	1	1	4.3	4.3	∞
3	Boundary effect	B	1.1	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	1.0	N	1	1	1	1.0	1.0	∞
7	Response time	B	0.0	R	$\sqrt{3}$	1	1	0.0	0.0	∞
8	Integration time	B	1.7	R	$\sqrt{3}$	1	1	1.0	1.0	∞
9	RF ambient conditions-noise	B	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
10	RF ambient conditions-reflection	B	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
11	Probe positioned mech. Restrictions	B	0.35	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	5
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	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
19	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
20	Liquid conductivity (meas.)	A	1.3	N	1	0.64	0.43	0.83	0.56	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	0.96	0.78	521
Combined standard uncertainty		$u_c' = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						11.1	11.0	257
Expanded uncertainty (Confidence interval of 95 %)		$u_e = 2u_c$						22.2	22.0	

17 MAIN TEST INSTRUMENTS

Table 17.1: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	Agilent E5071C	MY46103759	2016-11-19	One year
02	Dielectric probe	85070E	MY44300317	/	
03	Power meter	NRP	102603	2017-01-06	One year
04	Power sensor	NRP-Z51	102211		
05	Signal Generator	E8257D	MY47461211	2017-06-06	One year
06	Amplifier	VTL5400	0404	/	
07	E-field Probe	SPEAG EX3DV4	3633	2017-01-23	One year
08	DAE	SPEAG DAE4	786	2016-12-08	One year
09	Dipole Validation Kit	SPEAG D835V2	4d057	2015-10-22	Three year
10	Dipole Validation Kit	SPEAG D1750V2	1152	2016-09-09	Three year
11	Dipole Validation Kit	SPEAG D1900V2	5d088	2015-11-04	Three year
12	Dipole Validation Kit	SPEAG D2550V2	1010	2015-07-24	Three year
13	BTS	E5515C	GB47460389	2017-01-06	One year
14	Radio Communication Analyzer	Anristu MT8820C	6201563767	2017-01-06	One year

END OF REPORT BODY

ANNEX A Graph Results

GSM850 Right Cheek High

Date/Time: 6/27/2017

Electronics: DAE4 Sn786

Medium: Head 900

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.928$ S/m; $\epsilon_r = 40.852$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.0°C Liquid Temperature: 21.5°C

Communication System: UID 0, GSM (0) Frequency: 848.8 MHz Duty Cycle: 1:8.3

Probe: EX3DV4 - SN3633 ConvF(8.88, 8.88, 8.88);

Right Cheek High/Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 0.271 W/kg

Right Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.305 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.323 W/kg

SAR(1 g) = 0.264 W/kg; SAR(10 g) = 0.203 W/kg

Maximum value of SAR (measured) = 0.274 W/kg

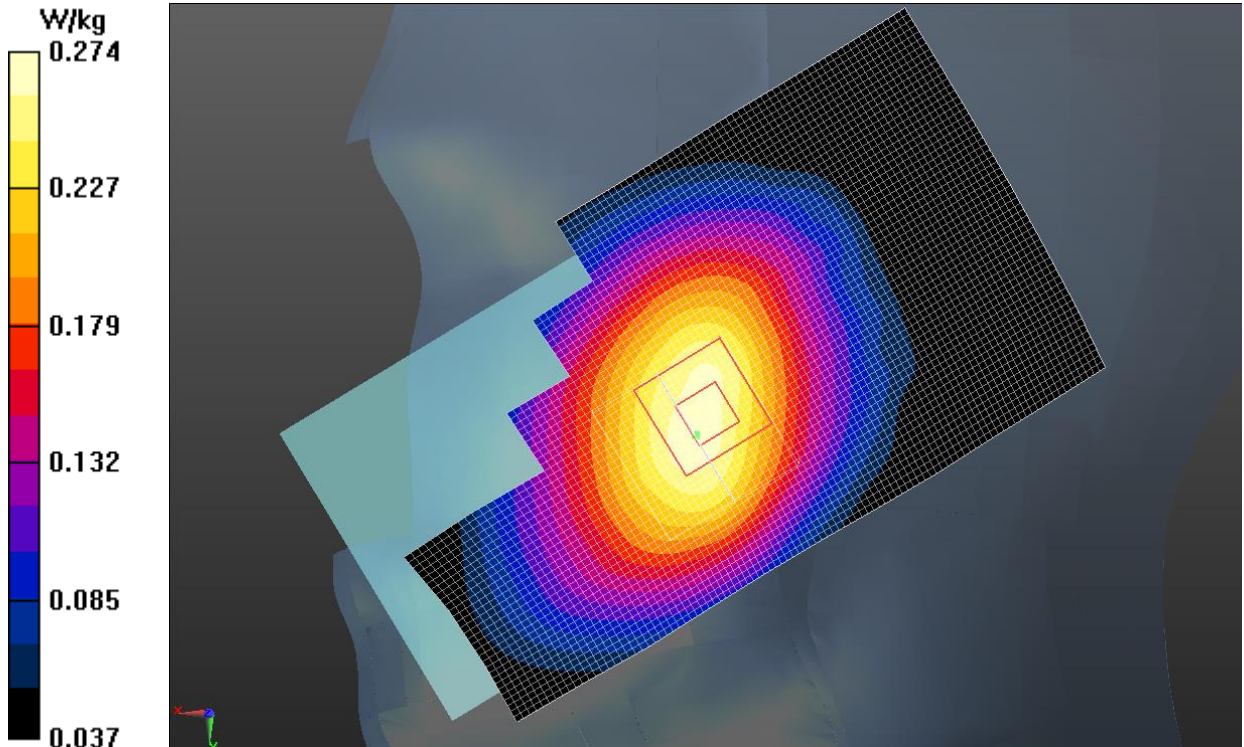


Fig.1 GSM 850MHz

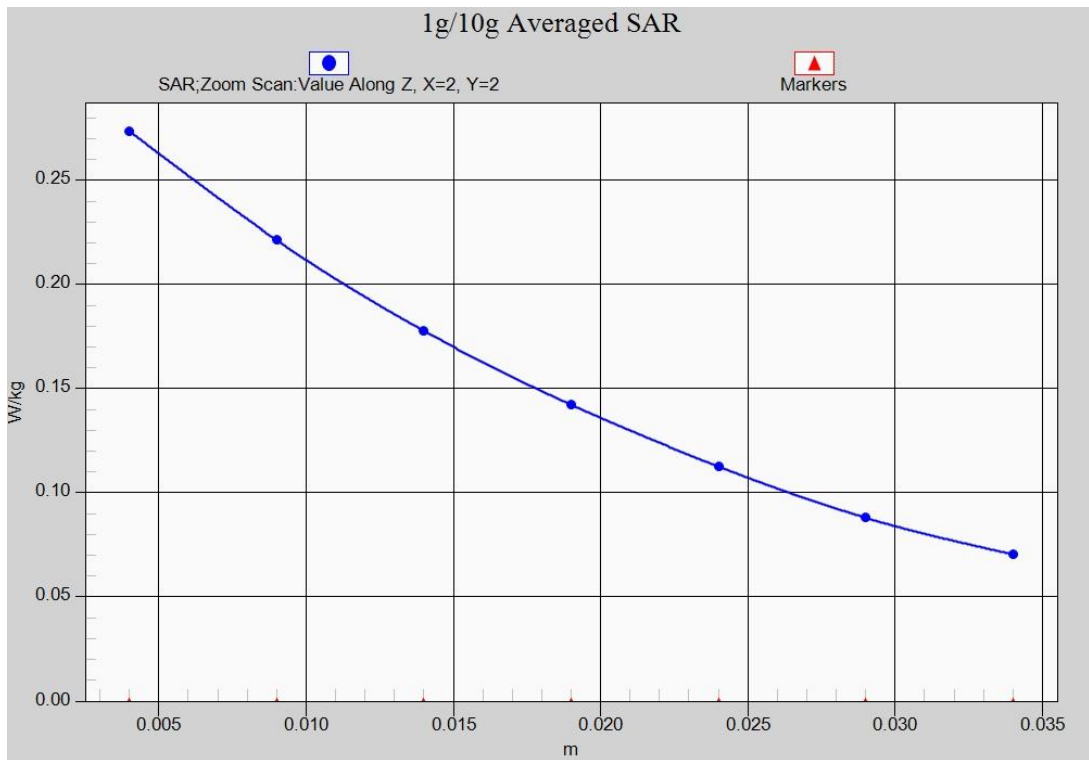


Fig.1-1 Z-Scan at power reference point (GSM 850 MHz)

GSM850 Body Rear High

Date/Time: 6/27/2017

Electronics: DAE4 Sn786

Medium: Body 900 MHz

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 1.005$ S/m; $\epsilon_r = 52.562$ $\rho = 1000$ kg/m³

Ambient Temperature: 22.0°C Liquid Temperature: 21.5°C

Communication System: UID 0, 4 slot GPRS (0) Frequency: 848.8 MHz Duty Cycle: 1:2

Probe: EX3DV4 - SN3633 ConvF(9.24, 9.24, 9.24);

Rear side High/Area Scan (111x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.553 W/kg

Rear side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.22 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.673 W/kg

SAR(1 g) = 0.541 W/kg; SAR(10 g) = 0.414 W/kg

Maximum value of SAR (measured) = 0.566 W/kg

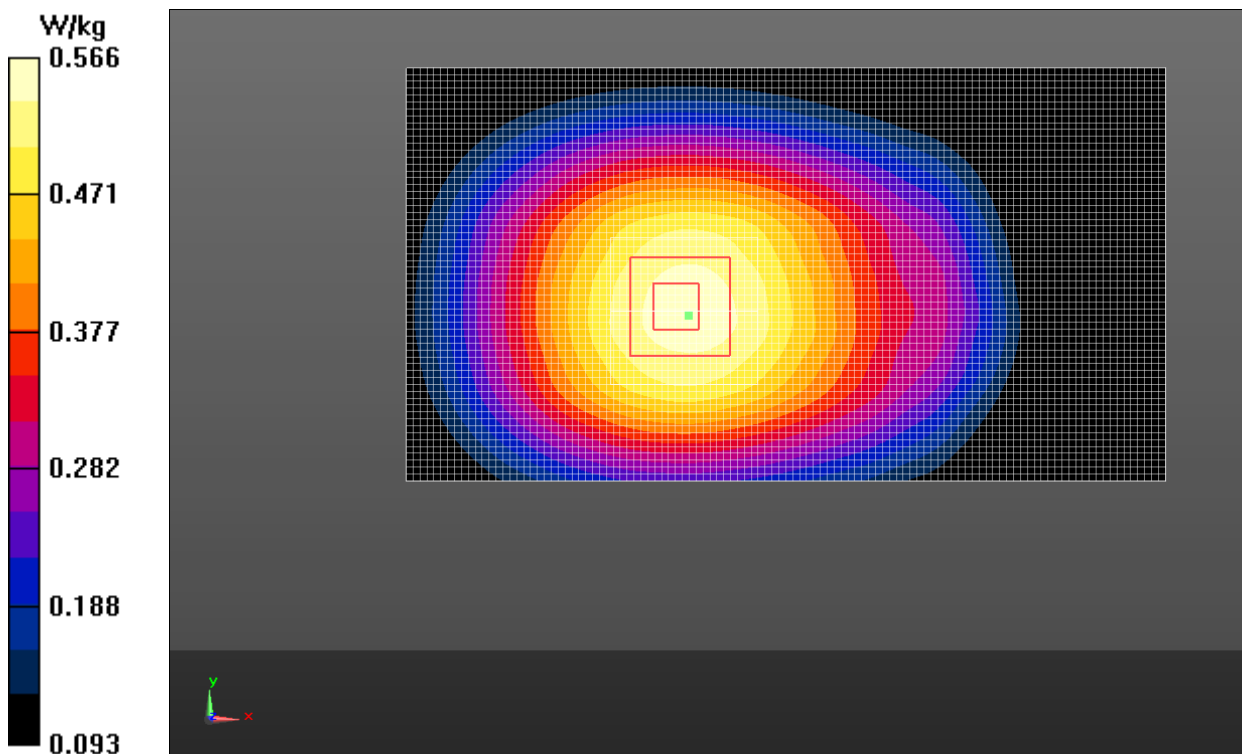


Fig.2 GSM 850 MHz

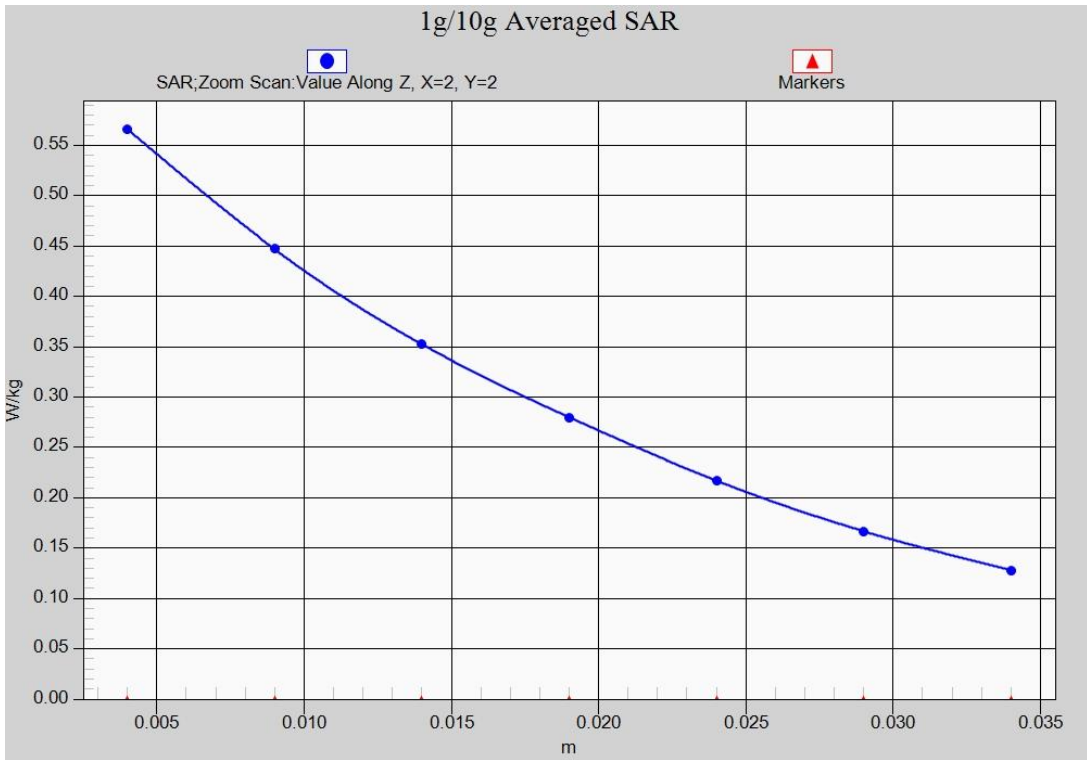


Fig.2-1 Z-Scan at power reference point (GSM 850 MHz)

GSM1900 Left Cheek High

Date/Time: 7/2/2017

Electronics: DAE4 Sn786

Medium: 1900Head

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.42$ S/m; $\epsilon_r = 39.142$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.0°C Liquid Temperature: 21.5°C

Communication System: UID 0, GSM (0) Frequency: 1910 MHz Duty Cycle: 1:8.3

Probe: EX3DV4 - SN3633 ConvF(8, 8, 8);

Left Cheek High/Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.180 W/kg

Left Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.534 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.246 W/kg

SAR(1 g) = 0.158 W/kg; SAR(10 g) = 0.099 W/kg

Maximum value of SAR (measured) = 0.171 W/kg

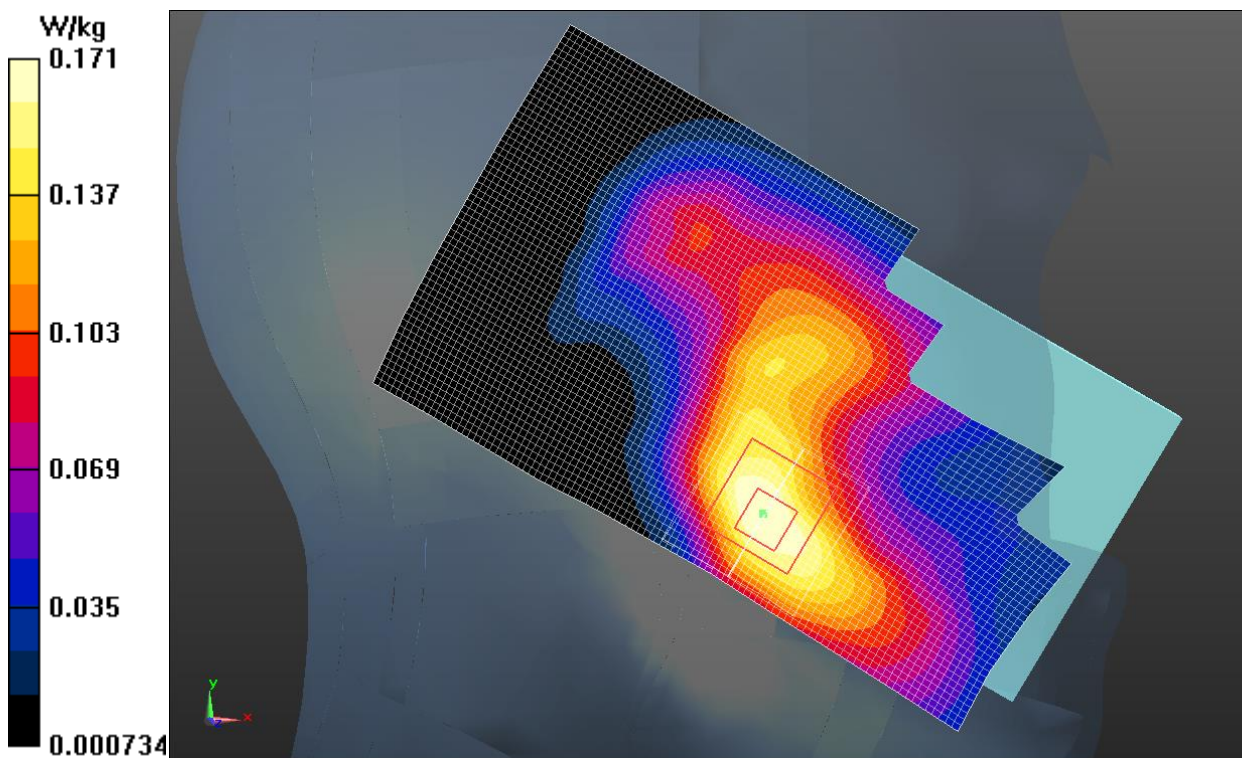


Fig.3 GSM 1900 MHz

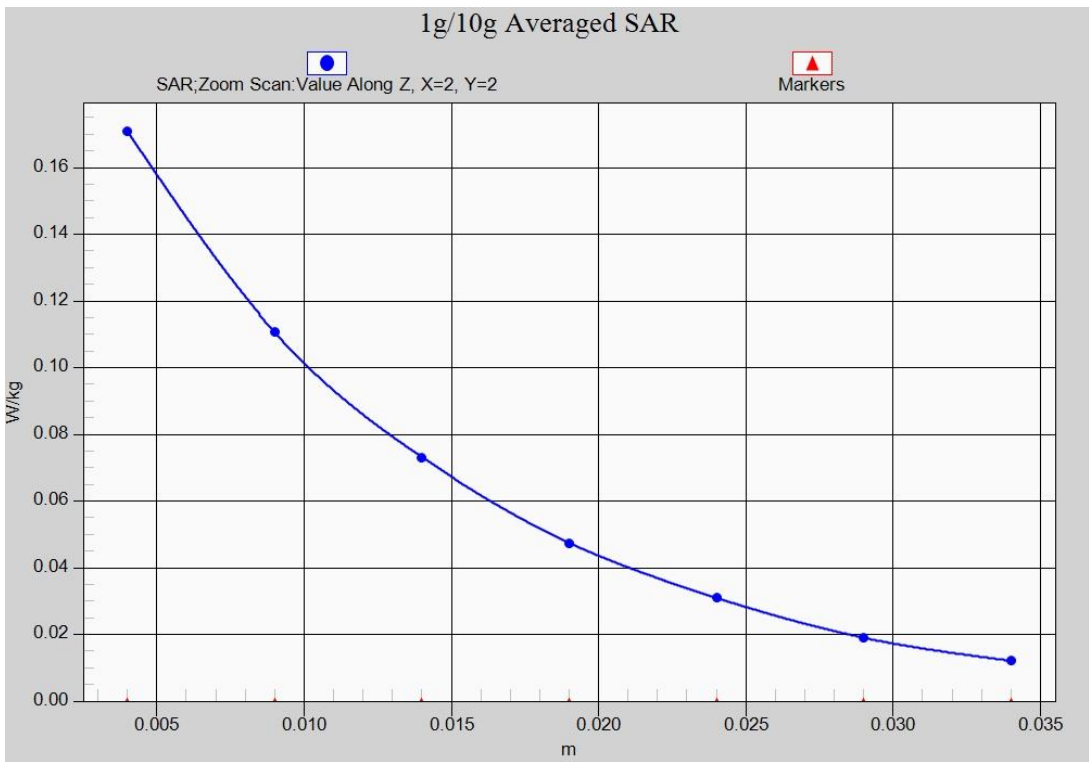


Fig.3-1 Z-Scan at power reference point (GSM 1900 MHz)

GSM1900 Body Rear High

Date/Time: 7/2/2017

Electronics: DAE4 Sn786

Medium: 1900 Body

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.549$ S/m; $\epsilon_r = 52.843$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.0°C Liquid Temperature: 21.5°C

Communication System: UID 0, 4 slot GPRS (0) Frequency: 1909.8 MHz Duty Cycle: 1:2.

Probe: EX3DV4 - SN3633 ConvF(7.55, 7.55, 7.55);

Rear side High/Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.364 W/kg

Rear side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.427 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 0.519 W/kg

SAR(1 g) = 0.326 W/kg; SAR(10 g) = 0.205 W/kg

Maximum value of SAR (measured) = 0.350 W/kg

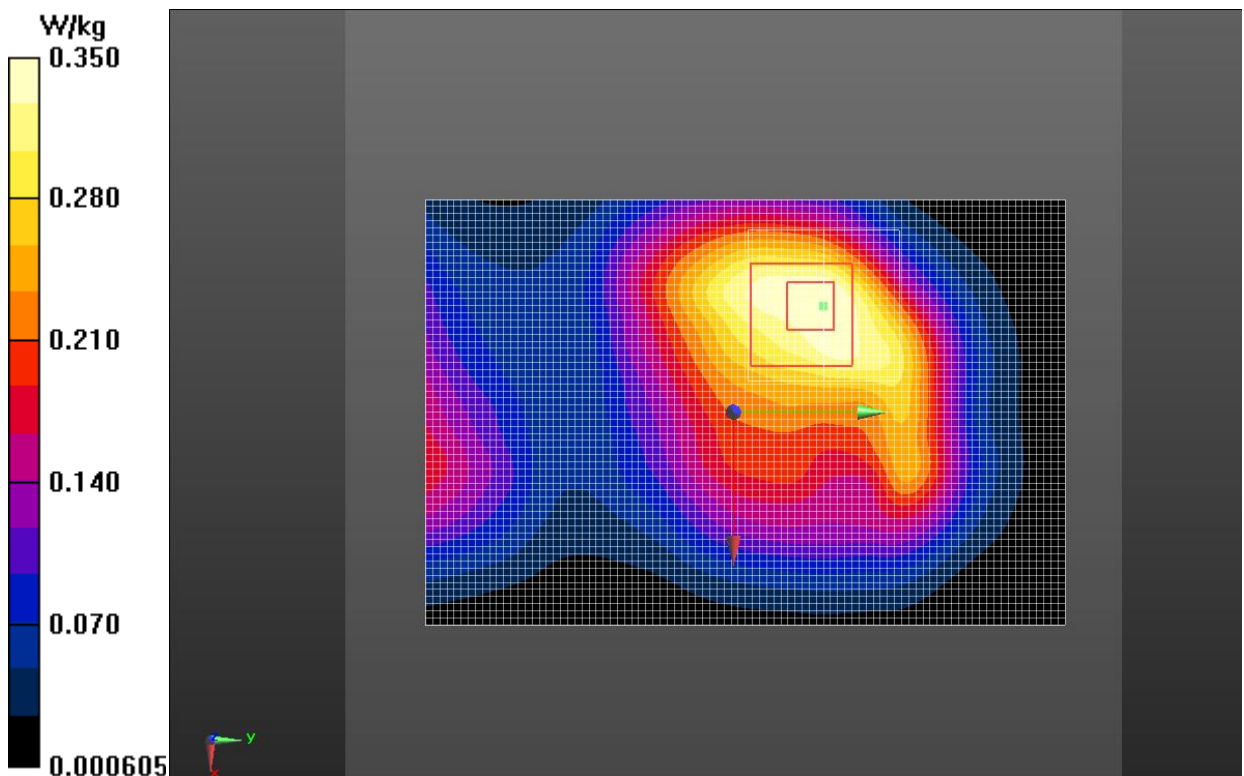


Fig.4 GSM 1900 MHz

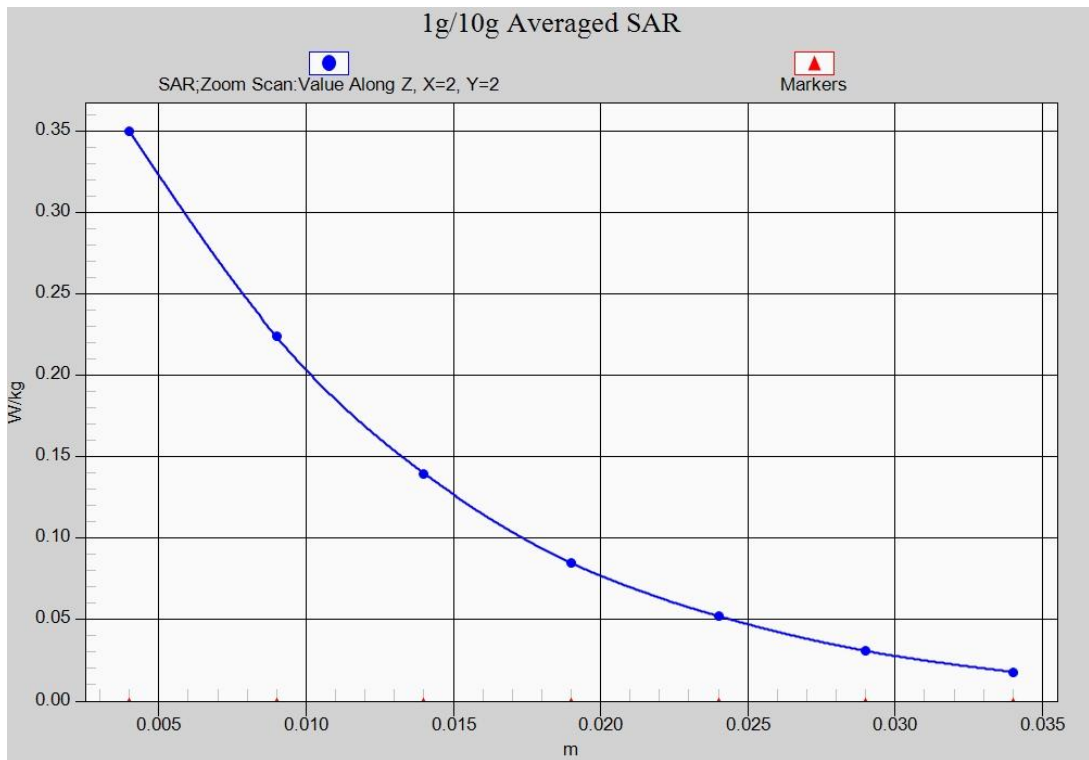


Fig.4-1 Z-Scan at power reference point (GSM 1900 MHz)

WCDMA 850 Left Cheek High

Date/Time: 6/27/2017

Electronics: DAE4 Sn786

Medium: 900 Head

Medium parameters used (interpolated): $f = 846.6$ MHz; $\sigma = 0.923$ S/m; $\epsilon_r = 40.860$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.0°C Liquid Temperature: 21.5°C

Communication System: UID 0, W-CDMA 835(Band5) Frequency: 846.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3633 ConvF(8.88, 8.88, 8.88);

Left cheek High/Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.206 W/kg

Left cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.503 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.245 W/kg

SAR(1 g) = 0.195 W/kg; SAR(10 g) = 0.148 W/kg

Maximum value of SAR (measured) = 0.204 W/kg

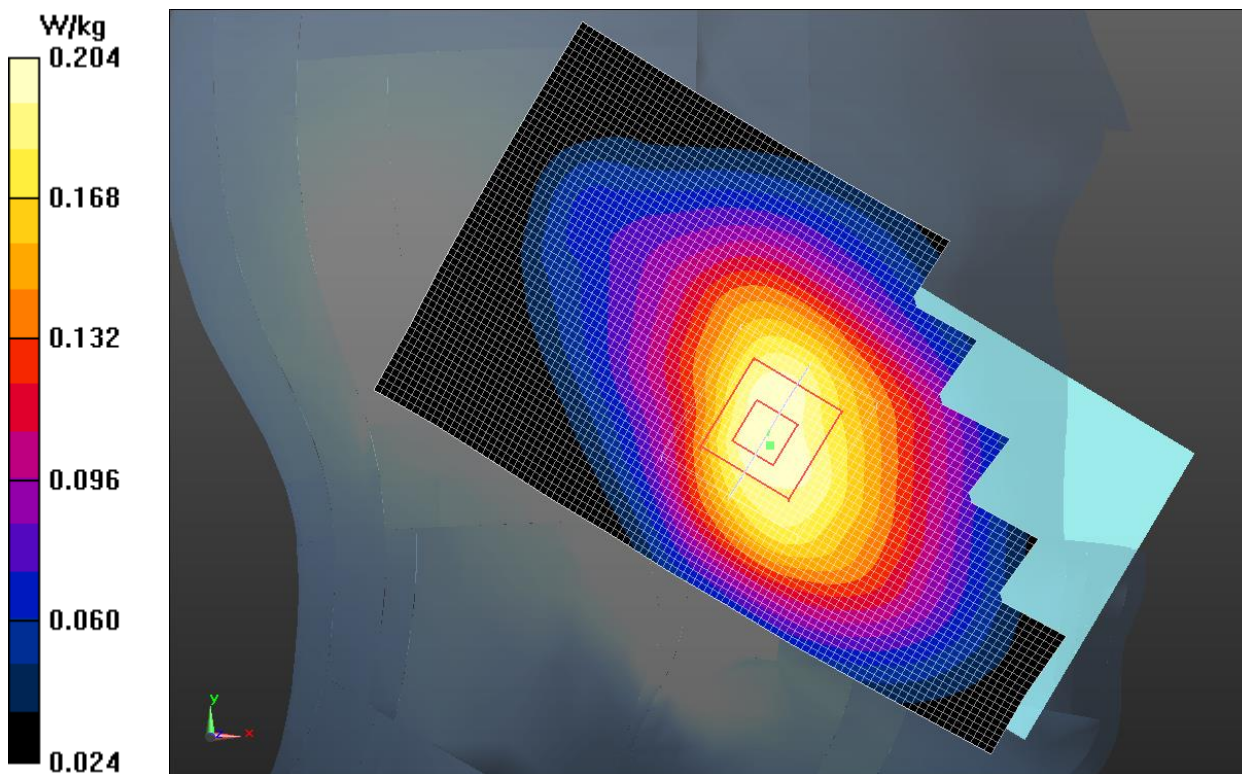


Fig.5 WCDMA 850

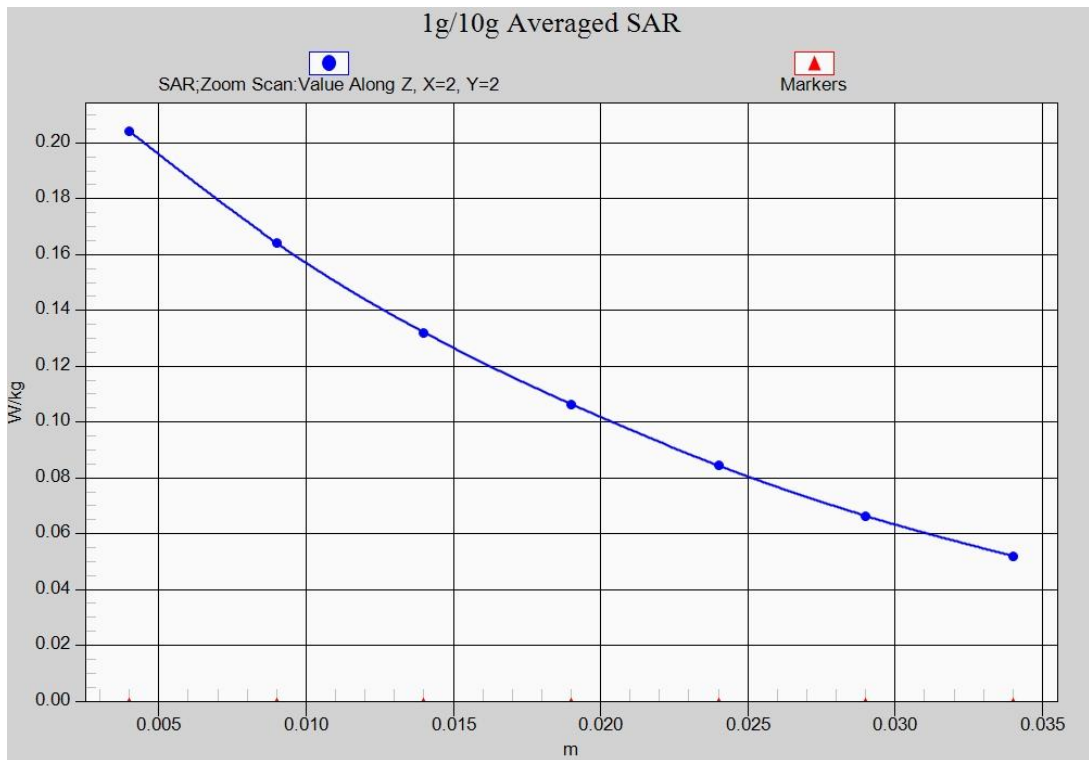


Fig.5-1 Z-Scan at power reference point (WCDMA 850)

WCDMA 850 Body Rear Middle

Date/Time: 6/27/2017

Electronics: DAE4 Sn786

Medium: Body 900 MHz

Medium parameters used (interpolated): $f = 846.6$ MHz; $\sigma = 1.002$ S/m; $\epsilon_r = 52.574$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.0°C Liquid Temperature: 21.5°C

Communication System: UID 0, WCDMA (0) Frequency: 846.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3633 ConvF(9.24, 9.24, 9.24);

Rear side High/Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.229 W/kg

Rear side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.03 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.265 W/kg

SAR(1 g) = 0.212 W/kg; SAR(10 g) = 0.165 W/kg

Maximum value of SAR (measured) = 0.222 W/kg

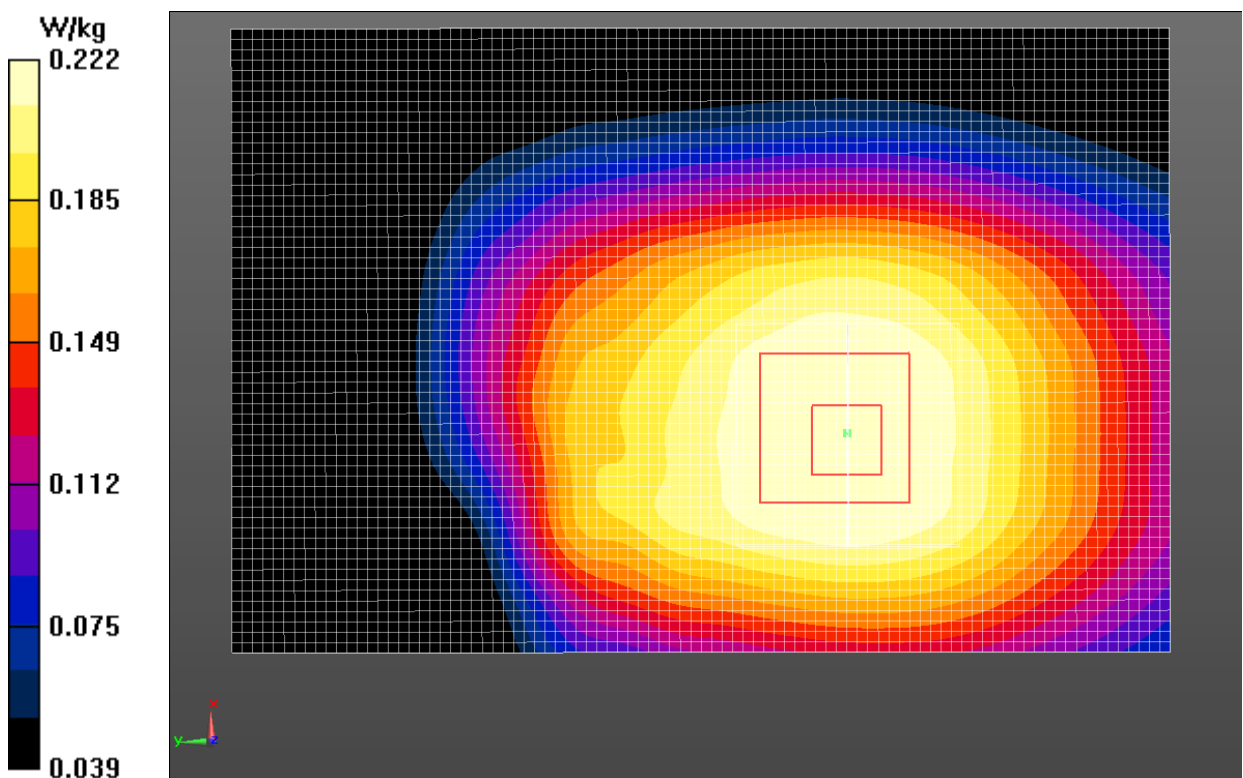


Fig.6 WCDMA 850

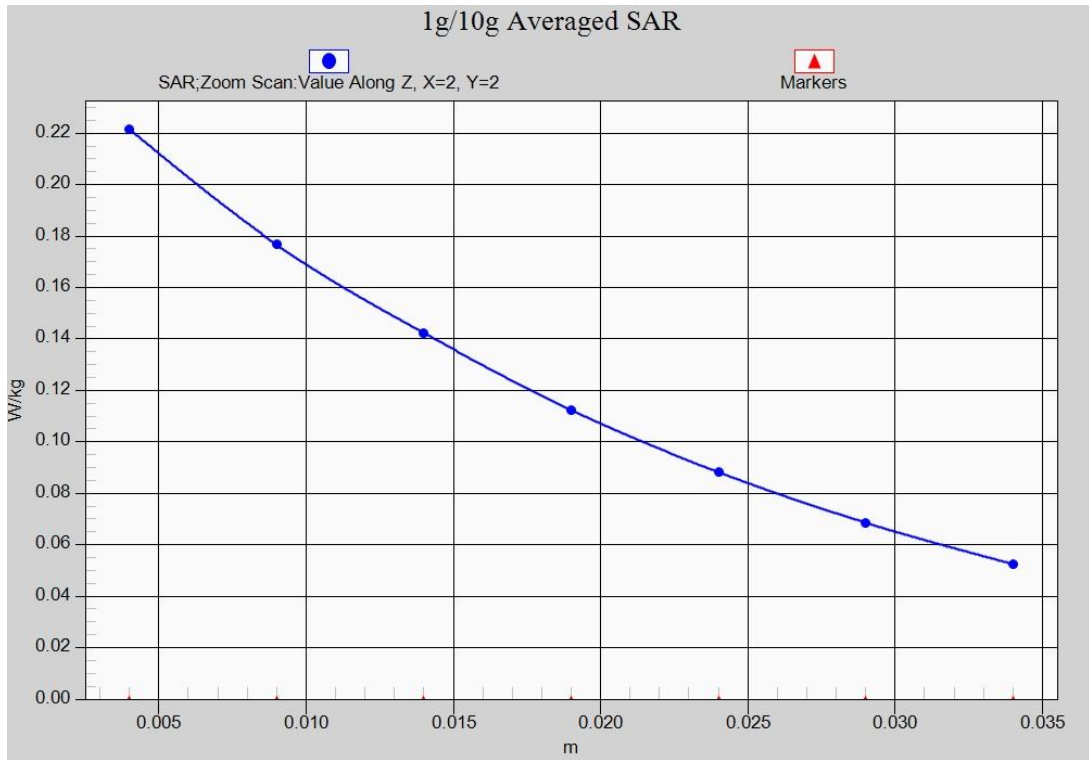


Fig.6-1 Z-Scan at power reference point (WCDMA850)

WCDMA 1700 Left Cheek High

Date/Time: 6/30/2017

Electronics: DAE4 Sn786

Medium: 1800Head

Medium parameters used (interpolated): $f = 1752.6\text{MHz}$; $\sigma = 1.342\text{S/m}$; $\epsilon_r = 39.551$; $\rho = 1000\text{ kg/m}^3$

Ambient Temperature: 22.0oC Liquid Temperature: 21.5oC

Communication System: UID 0, WCDMA (0) Frequency: 1752.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3633 ConvF(8.08, 8.08, 8.08);

Left Cheek High/Area Scan (61x101x1): Interpolated grid: $dx=1.500\text{ mm}$, $dy=1.500\text{ mm}$

Maximum value of SAR (interpolated) = 0.248 W/kg

Left Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 3.283 V/m; Power Drift = 0.75 dB

Peak SAR (extrapolated) = 0.320 W/kg

SAR(1 g) = 0.228 W/kg; SAR(10 g) = 0.152 W/kg

Maximum value of SAR (measured) = 0.240 W/kg

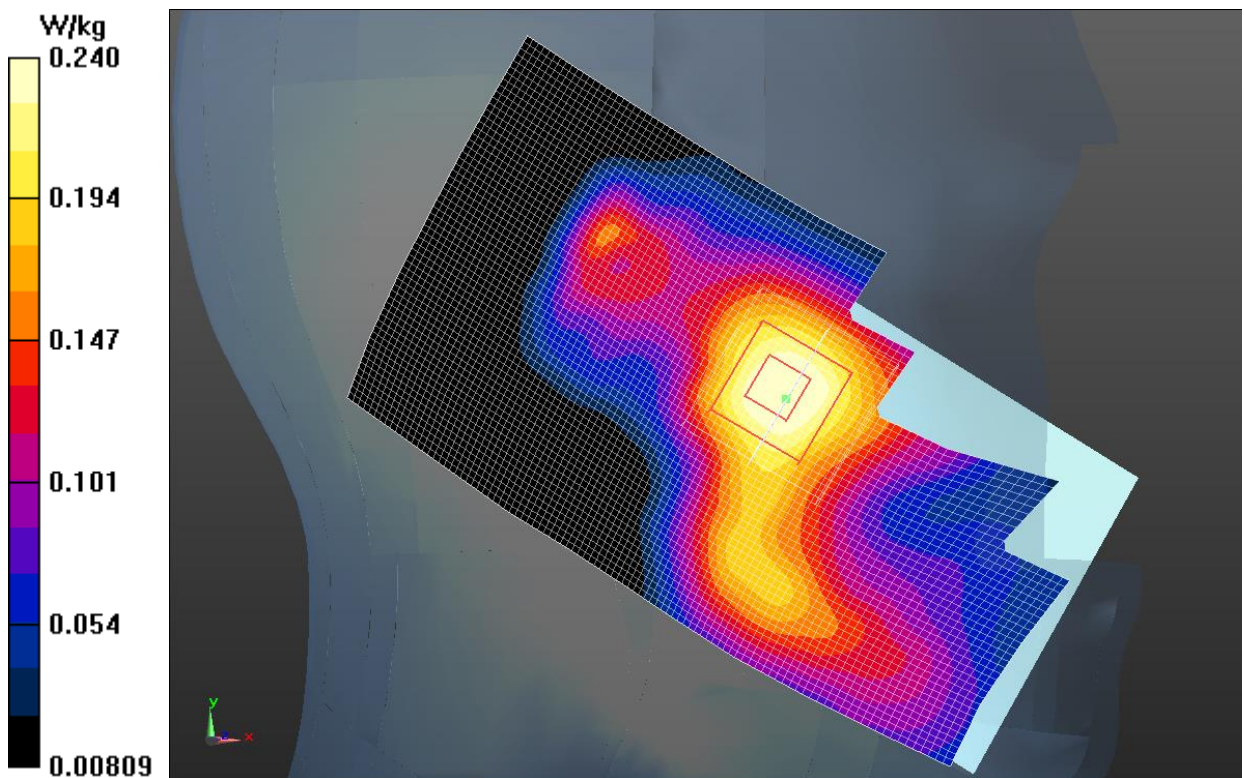


Fig.7 WCDMA1700

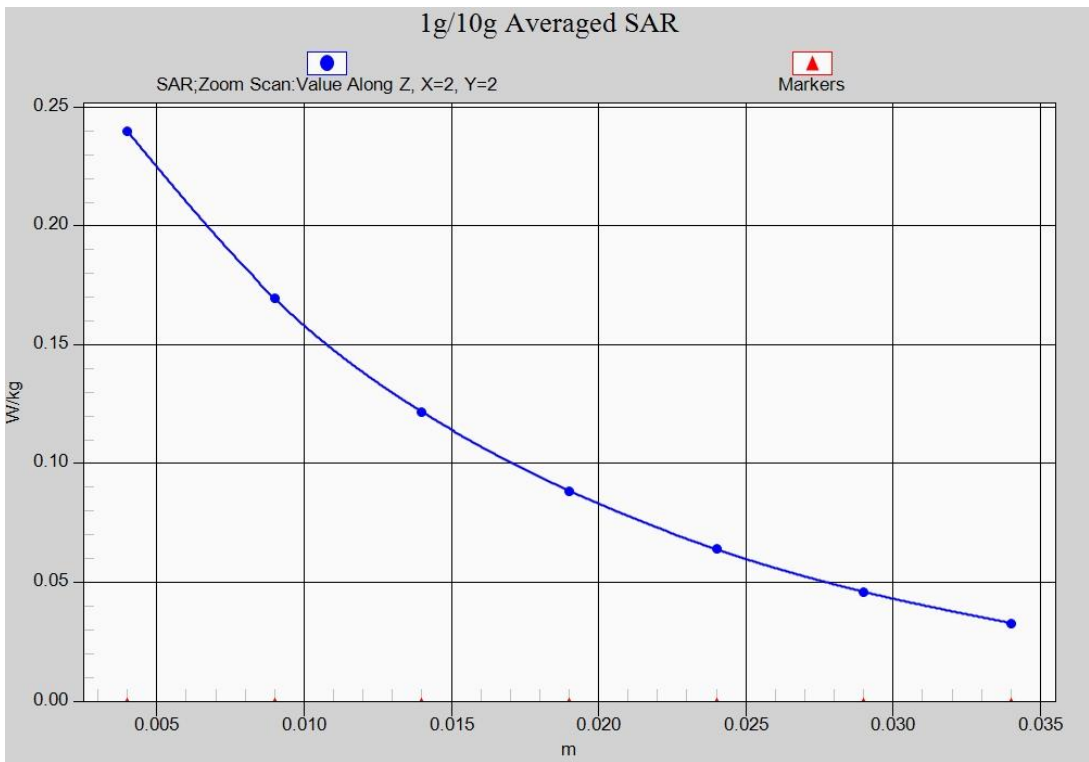


Fig.7-1 Z-Scan at power reference point (WCDMA1700)

WCDMA 1700 Body Rear Low

Date/Time: 6/30/2017

Electronics: DAE4 Sn786

Medium: 1800 Body

Medium parameters used (interpolated): $f = 1712.4$ MHz; $\sigma = 1.442$ S/m; $\epsilon_r = 53.362$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.0°C Liquid Temperature: 21.5°C

Communication System: UID 0, WCDMA (0) Frequency: 1712.4 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3633 ConvF(7.9, 7.9, 7.9);

Front side Low /Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 1.34 W/kg

Front side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.869 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 2.26 W/kg

SAR(1 g) = 1.25 W/kg; SAR(10 g) = 0.662 W/kg

Maximum value of SAR (measured) = 1.41 W/kg

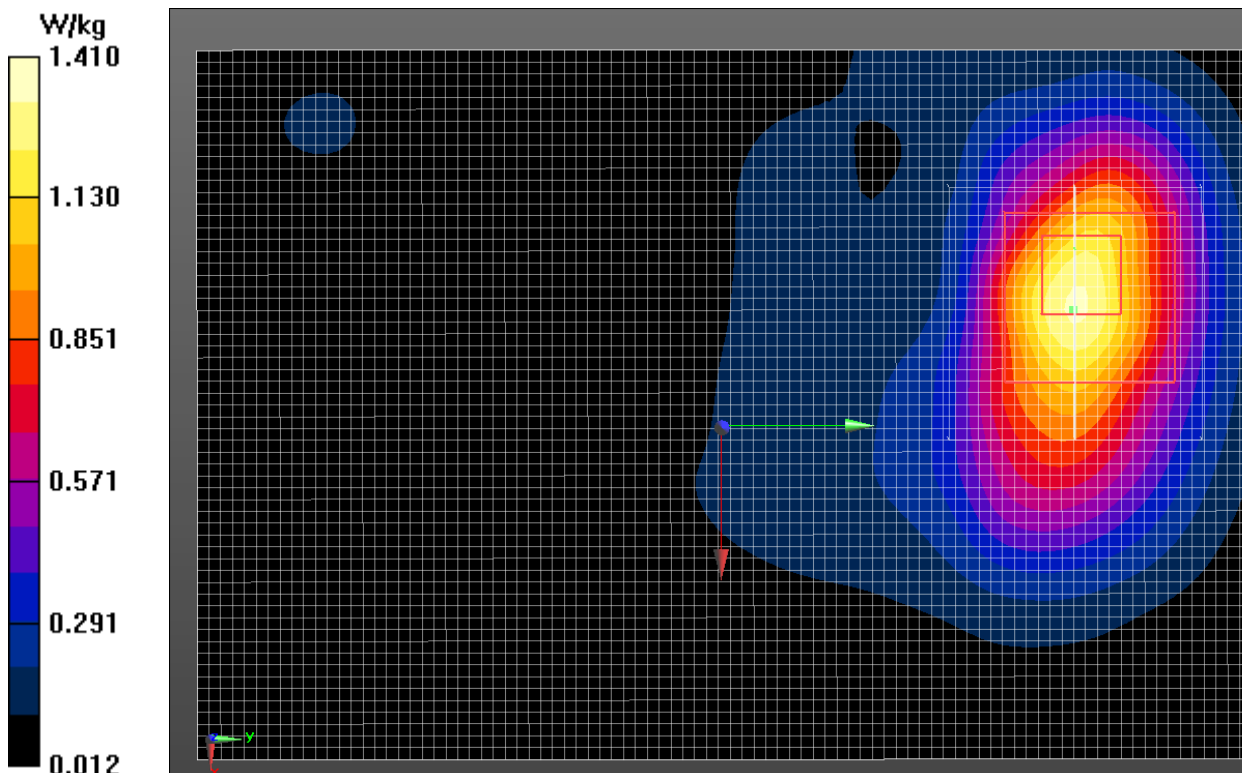


Fig.8 WCDMA1700

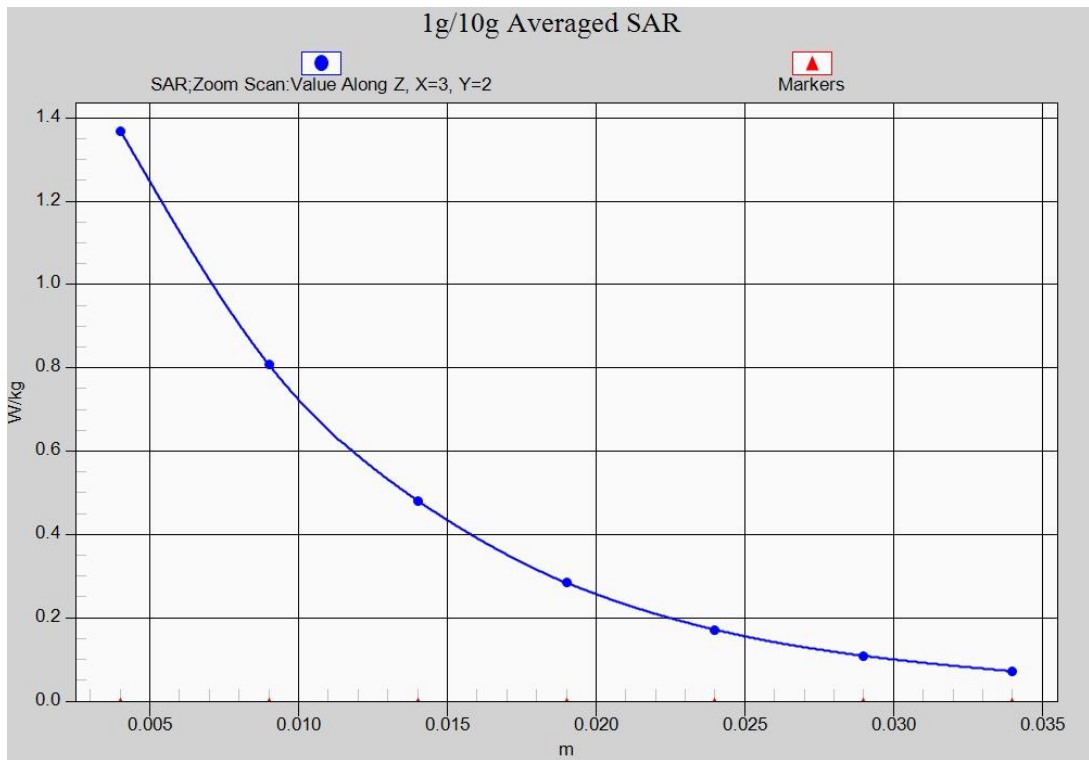


Fig.8-1 Z-Scan at power reference point (WCDMA1700)

WCDMA 1900 Left Cheek High

Date/Time: 7/2/2017

Electronics: DAE4 Sn786

Medium: 1900Head

Medium parameters used: $f = 1907.6$ MHz; $\sigma = 1.41$ S/m; $\epsilon_r = 39.121$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.0°C Liquid Temperature: 21.5°C

Communication System: UID 0, WCDMA (0) Frequency: 1907.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3633 ConvF(8, 8, 8);

Left Cheek High/Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.443 W/kg

Left Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.592 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.603 W/kg

SAR(1 g) = 0.382 W/kg; SAR(10 g) = 0.234 W/kg

Maximum value of SAR (measured) = 0.425 W/kg

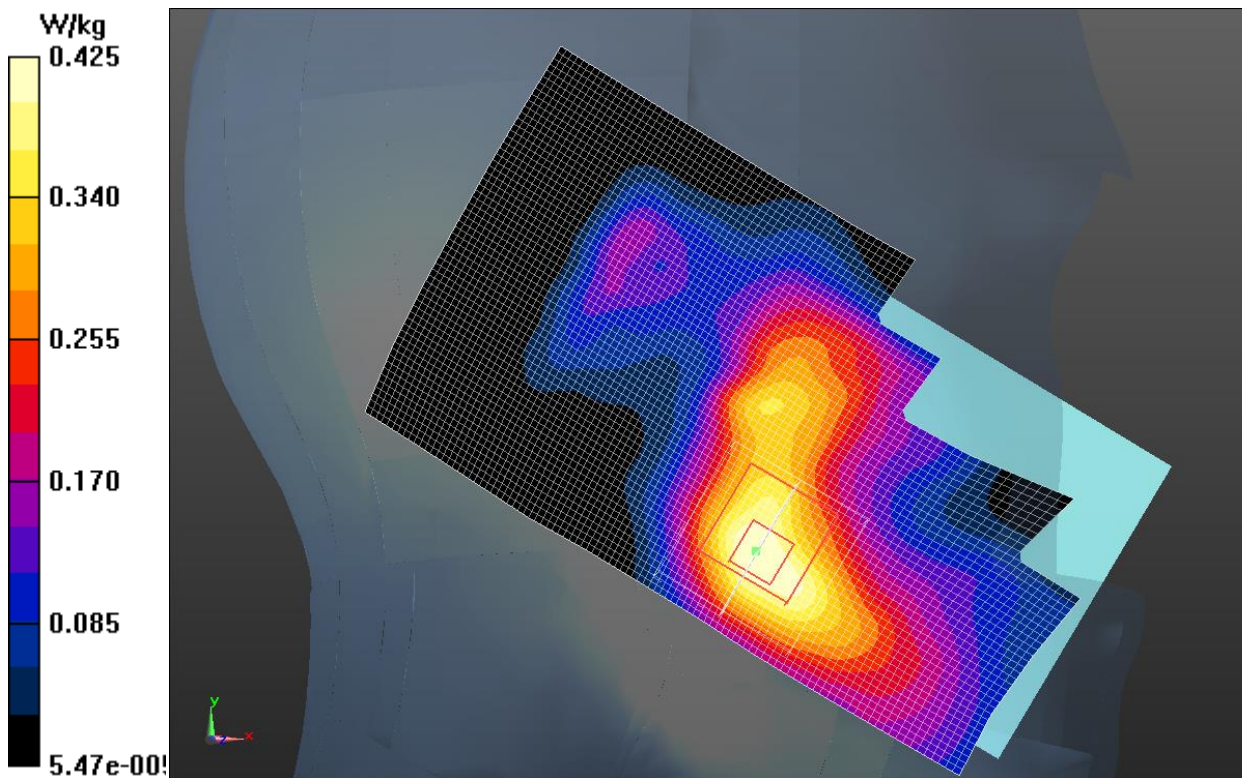


Fig.9 WCDMA1900

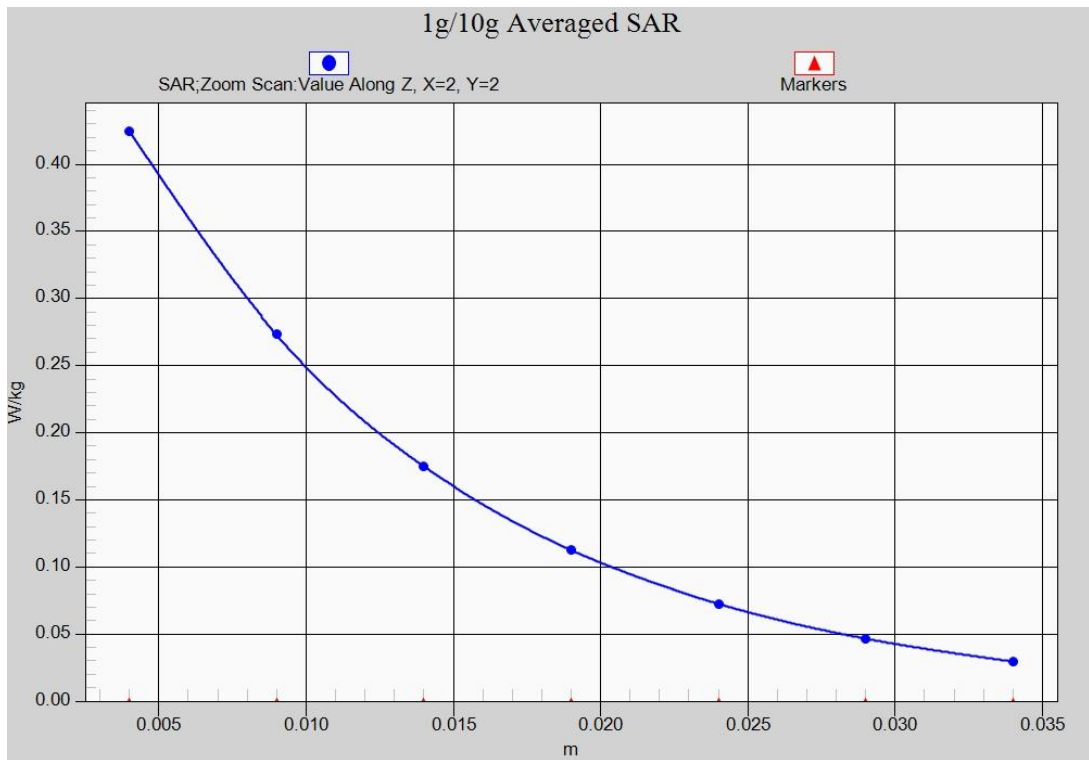


Fig.9-1 Z-Scan at power reference point (WCDMA1900)

WCDMA 1900 Body Front Middle

Date/Time: 7/2/2017

Electronics: DAE4 Sn786

Medium: 1900 Body

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.532$ S/m; $\epsilon_r = 52.967$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.0°C Liquid Temperature: 21.5°C

Communication System: UID 0, WCDMA (0) Frequency: 1880 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3633 ConvF(7.55, 7.55, 7.55);

Front side Middle 10mm/Area Scan (111x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.483 W/kg

Front side Middle 10mm/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.60 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.700 W/kg

SAR(1 g) = 0.413 W/kg; SAR(10 g) = 0.249W/kg

Maximum value of SAR (measured) = 0.456 W/kg

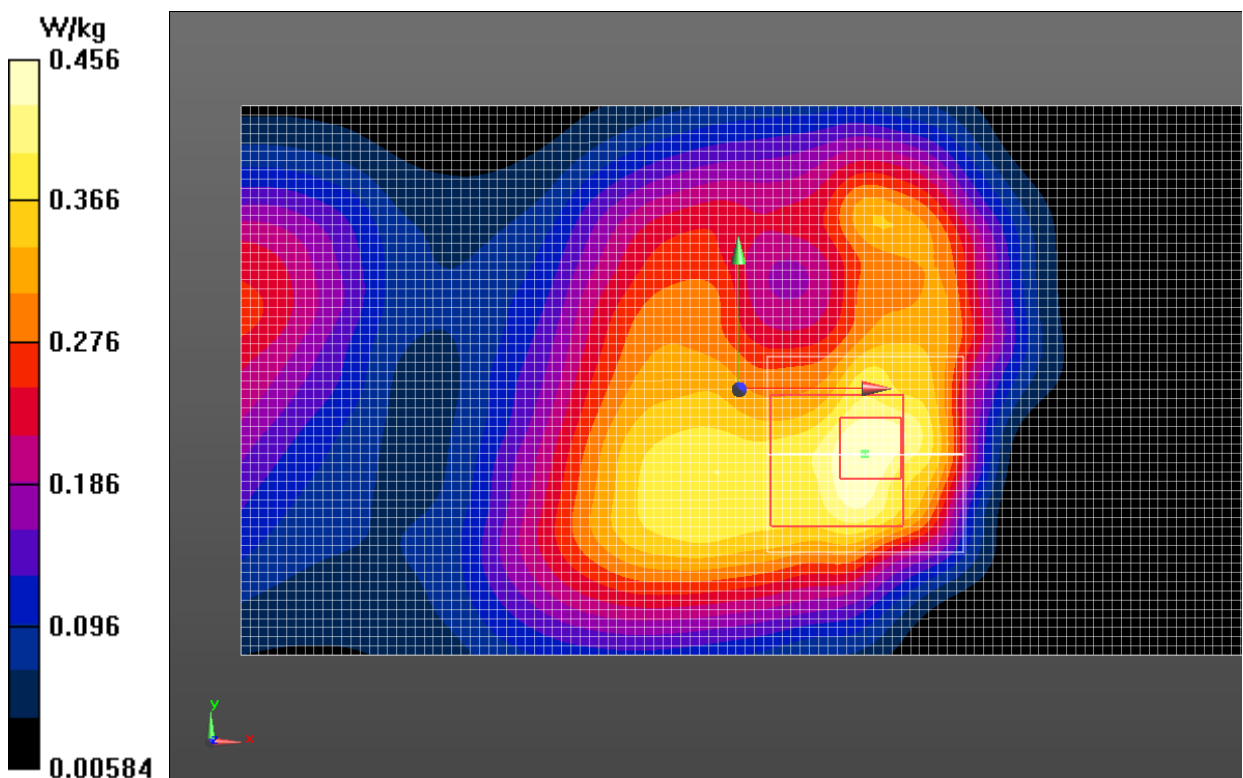


Fig.10 WCDMA1900

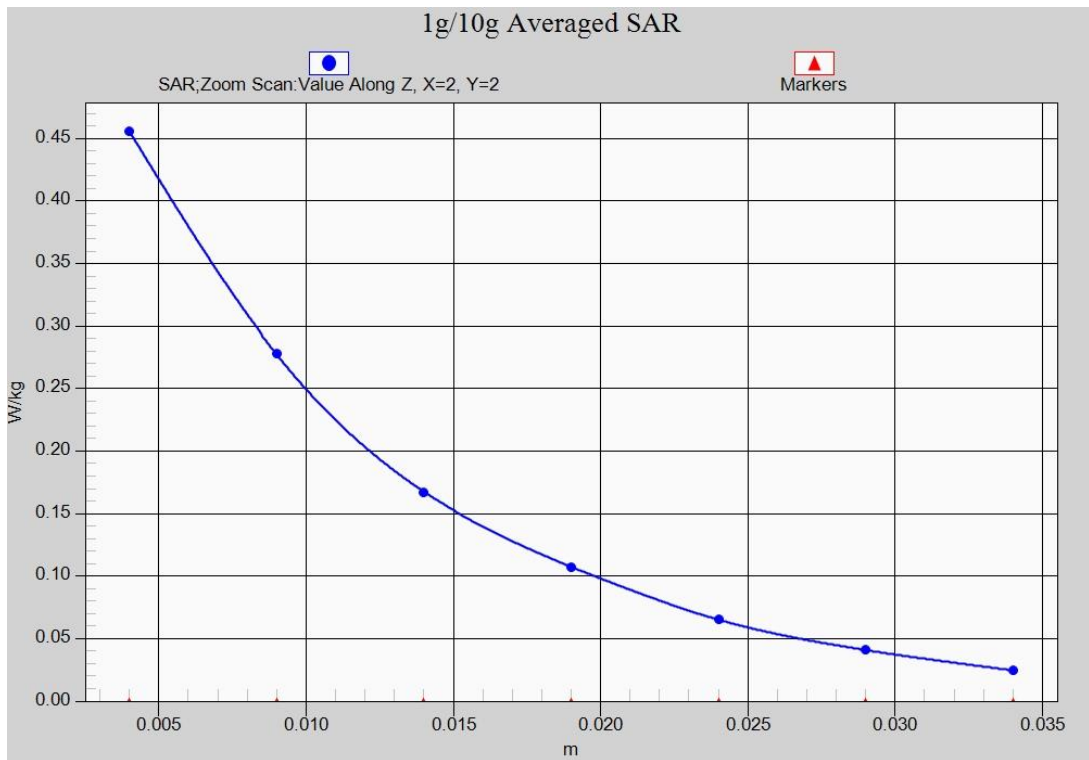


Fig.10-1 Z-Scan at power reference point (WCDMA1900)

LTE Band 2 Left Cheek Low with QPSK_20MHz_1RB_Mid

Date/Time: 7/2/2017

Electronics: DAE4 Sn786

Medium: 1900Head

Medium parameters used: $f = 1860$ MHz; $\sigma = 1.494$ S/m; $\epsilon_r = 39.321$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.0°C Liquid Temperature: 21.5°C

Communication System: UID 0, LTE_FDD (0) Frequency: 1860 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3633 ConvF(8, 8, 8);

Left Cheek Low 1RB_Middle/Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.226 W/kg

Left Cheek Low 1RB_Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.171 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.335 W/kg

SAR(1 g) = 0.207 W/kg; SAR(10 g) = 0.126 W/kg

Maximum value of SAR (measured) = 0.224 W/kg

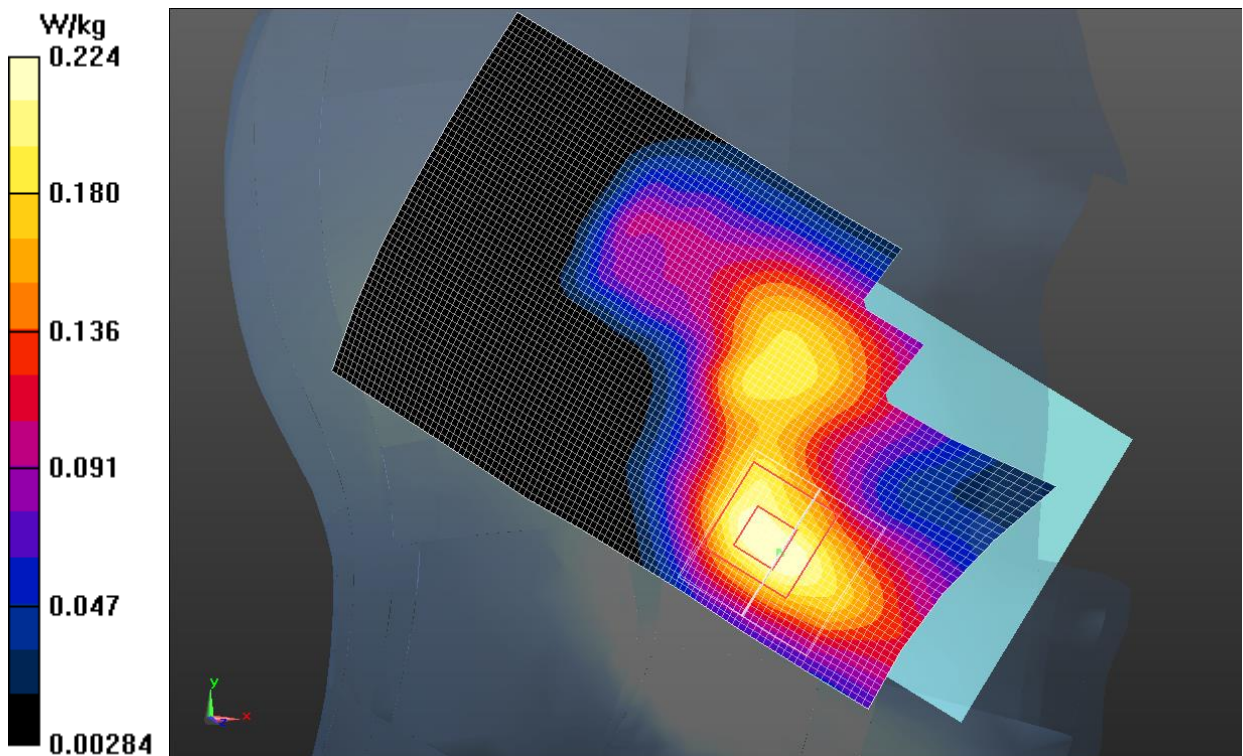


Fig.11 LTE Band 2