

**Table 14.1-4: SAR Values (GSM 1900 MHz Band - Body)**

		Ambient Temperature: 22.9 °C			Liquid Temperature: 22.5 °C						
Frequency		Mode (number of timeslots)	Test Position/ Headset	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 (2)	Front	/	26.76	28	0.285	0.38	0.473	0.63	-0.05
<b>1909.8</b>	<b>810</b>	GPRS (2)	Rear	<b>Fig.4</b>	<b>26.84</b>	<b>28</b>	<b>0.503</b>	<b>0.66</b>	<b>0.859</b>	<b>1.12</b>	<b>-0.14</b>
1880	661	GPRS (2)	Rear	/	26.76	28	0.471	0.63	0.836	1.11	-0.03
1850.2	512	GPRS (2)	Rear	/	26.74	28	0.452	0.60	0.804	1.07	-0.03
1880	661	GPRS (2)	Left	/	26.76	28	0.084	0.11	0.149	0.20	-0.14
1880	661	GPRS (2)	Right	/	26.76	28	0.082	0.11	0.147	0.20	0.00
1909.8	810	GPRS (2)	Bottom	/	26.84	28	0.370	0.48	0.718	0.94	-0.06
1880	661	GPRS (2)	Bottom	/	26.76	28	0.313	0.42	0.616	0.82	-0.06
1850.2	512	GPRS (2)	Bottom	/	26.74	28	0.314	0.42	0.607	0.81	0.00
1909.8	810	EGPRS (2)	Rear	/	26.76	28	0.442	0.59	0.797	1.06	-0.04

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

**Table 14.1-5: SAR Values (WCDMA 850 MHz Band - Head)**

		Ambient Temperature: 22.9 °C			Liquid Temperature: 22.5 °C						
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
846.6	4233	Left	Touch	/	23.32	23.5	0.317	0.33	0.463	0.48	-0.01
836.4	4182	Left	Touch	/	23.27	23.5	0.246	0.26	0.358	0.38	-0.07
<b>826.4</b>	<b>4132</b>	<b>Left</b>	<b>Touch</b>	<b>Fig.5</b>	<b>23.35</b>	<b>23.5</b>	<b>0.461</b>	<b>0.48</b>	<b>0.596</b>	<b>0.62</b>	<b>0.07</b>
836.4	4182	Left	Tilt	/	23.27	23.5	0.134	0.14	0.192	0.20	0.16
836.4	4182	Right	Touch	/	23.27	23.5	0.214	0.23	0.311	0.33	0.07
836.4	4182	Right	Tilt	/	23.27	23.5	0.129	0.14	0.185	0.20	-0.04

**Table 14.1-6: SAR Values (WCDMA 850 MHz Band - Body)**

		Ambient Temperature: 22.9 °C			Liquid Temperature: 22.5 °C					
Frequency		Test Position/ Headset	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	Front	/	23.27	23.5	0.424	0.45	0.595	0.63	0.07
846.6	4233	Rear	/	23.32	23.5	0.450	0.47	0.646	0.67	0.05
836.4	4182	Rear	/	23.27	23.5	0.449	0.47	0.603	0.64	0.03
<b>826.4</b>	<b>4132</b>	<b>Rear</b>	<b>Fig.6</b>	<b>23.35</b>	<b>23.5</b>	<b>0.608</b>	<b>0.63</b>	<b>0.809</b>	<b>0.84</b>	<b>-0.03</b>
836.4	4182	Left	/	23.27	23.5	0.138	0.15	0.206	0.22	-0.03
836.4	4182	Right	/	23.27	23.5	0.210	0.22	0.314	0.33	0.00
836.4	4182	Bottom	/	23.27	23.5	0.058	0.06	0.090	0.10	-0.13

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

**Table 14.1-7: SAR Values (WCDMA 1700 MHz Band - Head)**

Ambient Temperature: 22.9 °C      Liquid Temperature: 22.5 °C											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
1732.4	1637	Left	Touch	/	23.19	23.3	0.176	0.18	0.303	0.31	0.01
1732.4	1637	Left	Tilt	/	23.19	23.3	0.047	0.05	0.079	0.08	0.13
<b>1752.6</b>	<b>1738</b>	<b>Right</b>	<b>Touch</b>	<b>Fig.7</b>	<b>23.1</b>	<b>23.3</b>	<b>0.305</b>	<b>0.32</b>	<b>0.512</b>	<b>0.54</b>	<b>0.02</b>
1732.4	1637	Right	Touch	/	23.19	23.3	0.210	0.22	0.357	0.37	0.11
1712.4	1537	Right	Touch	/	23.21	23.3	0.141	0.14	0.239	0.24	0.09
1732.4	1637	Right	Tilt	/	23.1	23.3	0.112	0.12	0.187	0.20	0.18

**Table 14.1-8: SAR Values (WCDMA 1700 MHz Band - Body)**

Ambient Temperature: 22.9 °C      Liquid Temperature: 22.5 °C										
Frequency		Test Position/ Headset	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.									
1732.4	1637	Front	/	23.19	23.3	0.430	0.44	0.713	0.73	0.05
1752.6	1738	Rear	/	23.1	23.3	0.516	0.54	0.888	0.93	-0.08
1732.4	1637	Rear	/	23.19	23.3	0.592	0.61	1.020	1.05	-0.16
<b>1712.4</b>	<b>1537</b>	Rear	<b>Fig.8</b>	<b>23.21</b>	<b>23.3</b>	<b>0.632</b>	<b>0.65</b>	<b>1.070</b>	<b>1.09</b>	<b>-0.11</b>
1732.4	1637	Left	/	23.19	23.3	0.127	0.13	0.219	0.22	0.00
1732.4	1637	Right	/	23.19	23.3	0.091	0.09	0.160	0.16	-0.01
1732.4	1637	Bottom	/	23.19	23.3	0.262	0.27	0.521	0.53	-0.01

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

**Table 14.1-9: 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	9538	Left	Touch	/	23.07	23.2	0.377	<b>0.39</b>	0.607	<b>0.63</b>	0.12
1880	9400	Left	Touch	/	23.1	23.2	0.330	<b>0.34</b>	0.559	<b>0.57</b>	0.07
<b>1852.4</b>	<b>9262</b>	<b>Left</b>	<b>Touch</b>	<b>Fig.9</b>	<b>23.15</b>	<b>23.2</b>	<b>0.403</b>	<b>0.41</b>	<b>0.642</b>	<b>0.65</b>	<b>0.12</b>
1880	9400	Left	Tilt	/	23.1	23.2	0.192	<b>0.20</b>	0.333	<b>0.34</b>	-0.07
1880	9400	Right	Touch	/	23.1	23.2	0.302	<b>0.31</b>	0.516	<b>0.53</b>	0.17
1880	9400	Right	Tilt	/	23.1	23.2	0.216	<b>0.22</b>	0.366	<b>0.37</b>	0.02

**Table 14.1-10: SAR Values (WCDMA 1900 MHz Band - Body)**

Ambient Temperature: 22.9 °C				Liquid Temperature: 22.5 °C						
Frequency		Test Position/ Headset	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	/	23.1	23.2	0.445	0.46	0.726	0.74	0.17
<b>1907.6</b>	<b>9538</b>	<b>Rear</b>	<b>Fig.10</b>	<b>23.07</b>	<b>23.2</b>	<b>0.683</b>	<b>0.70</b>	<b>1.150</b>	<b>1.18</b>	<b>-0.19</b>
1880	9400	Rear	/	23.1	23.2	0.669	0.68	1.130	1.16	-0.06
1852.4	9262	Rear	/	23.15	23.2	0.686	0.69	1.130	1.14	-0.14
1880	9400	Left	/	23.1	23.2	0.135	0.14	0.242	0.25	0.02
1880	9400	Right	/	23.1	23.2	0.134	0.14	0.246	0.25	0.02
1907.6	9538	Bottom	/	23.07	23.2	0.471	0.49	0.920	0.95	0.00
1880	9400	Bottom	/	23.1	23.2	0.479	0.49	0.931	0.95	-0.04
1852.4	9262	Bottom	/	23.15	23.2	0.386	0.39	0.764	0.77	-0.04

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

## 14.2 SAR results for Standard procedure

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

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

Ambient Temperature: 22.9 °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	<b>32.45</b>	<b>32.8</b>	<b>0.542</b>	<b>0.59</b>	<b>0.700</b>	<b>0.76</b>	<b>0.00</b>

**Table 14.2-2: 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 (1)	Rear	Fig.2	<b>32.45</b>	<b>32.8</b>	<b>0.635</b>	<b>0.69</b>	<b>0.859</b>	<b>0.93</b>	<b>-0.01</b>

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

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

Ambient Temperature: 22.9 °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	<b>26.84</b>	<b>28</b>	<b>0.299</b>	<b>0.39</b>	<b>0.487</b>	<b>0.64</b>	<b>-0.07</b>

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

		Ambient Temperature: 22.9 °C			Liquid Temperature: 22.5 °C						
Frequency		Mode (number of timeslots)	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
1909.8	810	GPRS (2)	Rear	Fig.4	26.84	28	0.503	0.66	0.859	1.12	-0.14

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

**Table 14.2-5: 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.										
826.4	4132	Left	Touch	Fig.5	23.35	23.5	0.461	0.48	0.596	0.62	0.07

**Table 14.2-6: 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	23.35	23.5	0.608	0.63	0.809	0.84	-0.03

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

**Table 14.2-7: SAR Values (WCDMA 1700 MHz Band - Head)**

		Ambient Temperature: 22.9 °C			Liquid Temperature: 22.5 °C						
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
1752.6	1738	Right	Touch	Fig.7	23.1	23.3	0.305	0.32	0.512	0.54	0.02

**Table 14.2-8: SAR Values (WCDMA 1700 MHz Band - Body)**

		Ambient Temperature: 22.9 °C			Liquid Temperature: 22.5 °C					
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.									
1712.4	1537	Rear	Fig.8	23.21	23.3	0.632	0.65	1.070	1.09	-0.11

**Table 14.2-9: SAR Values (WCDMA 1900 MHz Band - Head)**

Ambient Temperature: 22.9 °C				Liquid Temperature: 22.5 °C							
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
1852.4	9262	Left	Touch	Fig.9	23.15	23.2	0.403	0.41	0.642	0.65	0.12

**Table 14.2-10: 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.									
1907.6	9538	Rear	Fig.10	23.07	23.2	0.683	0.70	1.150	1.18	-0.19

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

### 14.3 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 14.3-1: SAR Values (WLAN - Head) – 802.11b 1Mbps (Fast SAR)**

Frequency		Ambient Temperature: 22.9 °C		Liquid Temperature: 22.5 °C							
MHz	Ch.	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)
2462	11	Left	Touch	/	18.98	19	0.375	0.38	0.711	0.71	-0.04
2462	11	Left	Tilt	/	18.98	19	0.337	0.34	0.663	0.67	-0.04
2462	11	Right	Touch	/	18.98	19	0.464	0.47	0.961	0.97	-0.06
2462	11	Right	Tilt	/	18.98	19	0.440	0.44	0.931	0.94	0.07

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

**Table 14.3-2: SAR Values (WLAN - Head) – 802.11b 1Mbps (Full SAR)**

Frequency		Ambient Temperature: 22.9 °C		Liquid Temperature: 22.5 °C							
MHz	Ch.	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)
2462	11	Right	Touch	/	18.98	19	0.469	0.47	0.959	0.96	-0.06
2462	11	Right	Tilt	/	18.98	19	0.410	0.41	0.856	0.86	0.07
2462	11	Left	Touch	/	18.98	19	0.359	0.36	0.722	0.73	-0.04
<b>2437</b>	<b>6</b>	<b>Right</b>	<b>Touch</b>	<b>Fig.11</b>	<b>18.31</b>	<b>18.5</b>	<b>0.486</b>	<b>0.51</b>	<b>0.990</b>	<b>1.03</b>	<b>0.09</b>
2437	6	Right	Tilt	/	18.31	18.5	0.437	0.46	0.897	0.94	0.04

Note1: When the reported SAR of the initial test position is  $> 0.4 \text{ W/kg}$ , 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  $\leq 0.8 \text{ W/kg}$ .

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

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

**Table 14.3-3: SAR Values (WLAN - Head) – 802.11b 1Mbps (Scaled Reported SAR)**

Frequency		Ambient Temperature: 22.9 °C		Liquid Temperature: 22.5 °C			
MHz	Ch.	Side	Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
2437	6	Right	Touch	99.47%	100%	<b>1.03</b>	<b>1.04</b>
2462	11	Left	Touch	99.47%	100%	<b>0.73</b>	<b>0.73</b>

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

### Body Evaluation

**Table 14.3-4: 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.			(dBm)	(dBm)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)
2462	11	Front	/	18.98	19	0.063	0.06	0.118	0.12	0.16
2462	11	Rear	/	18.98	19	0.111	0.11	0.238	0.24	0.18
2462	11	Left	/	18.98	19	0.035	0.04	0.065	0.07	0.19
2462	11	Right	/	18.98	19	0.010	0.01	0.017	0.02	0.08
2462	11	Top	/	18.98	19	0.072	0.07	0.144	0.14	0.05

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

**Table 14.3-5: SAR Values (WLAN - Body) – 802.11b 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.			(dBm)	(dBm)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)
2462	11	Rear	Fig.12	18.98	19	0.117	0.12	0.250	0.25	0.18

Note1: When the reported SAR of the initial test position is  $> 0.4 \text{ W/kg}$ , 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  $\leq 0.8 \text{ W/kg}$ .

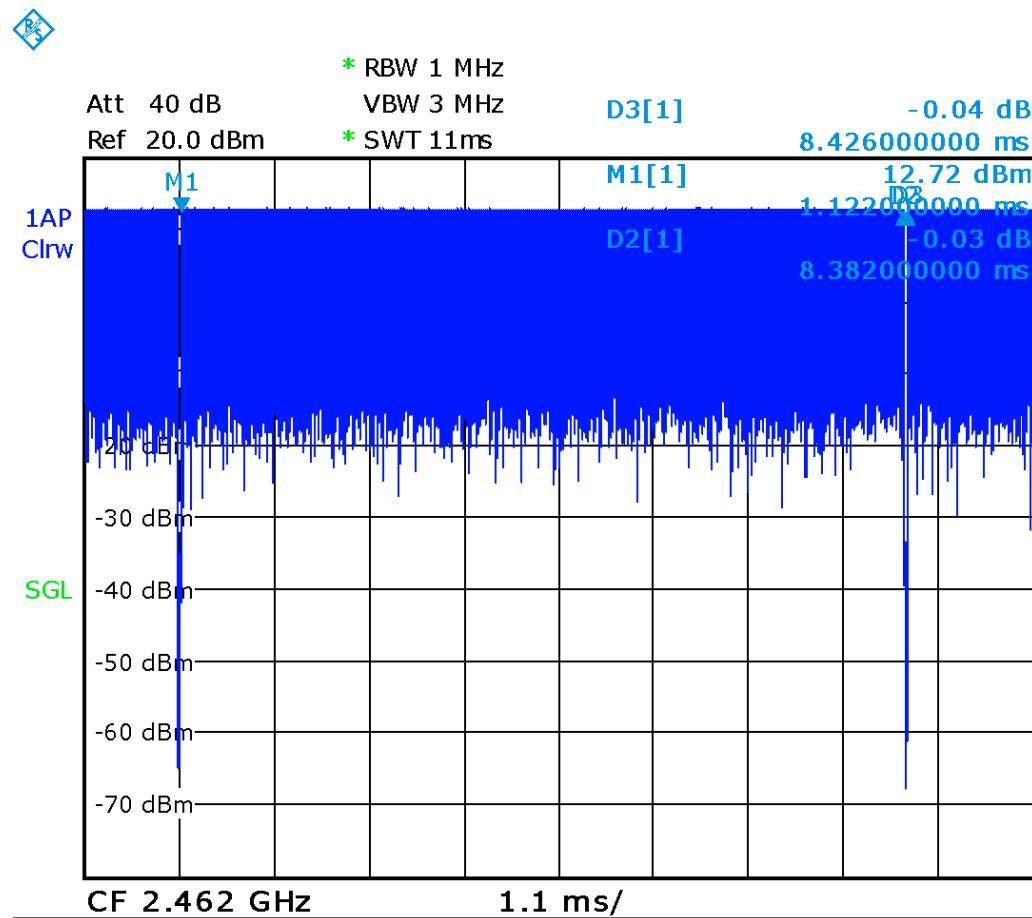
Note2: For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is  $> 0.8 \text{ W/kg}$ , SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the reported SAR is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

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

**Table 14.3-6: SAR Values (WLAN - Body) – 802.11b 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.			(W/kg)	(W/kg)	(W/kg)	
2462	11	Rear	99.47%	100%	0.25	0.25	

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



**Picture 14.1 Duty factor plot**

## 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  $\geq 0.80$  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  $\geq 1.45$  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  $\geq 1.5$  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 GSM850 (1g)**

Frequency		Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
MHz	Ch.						
848.8	251	Rear	10	0.859	0.851	1.01	/

**Table 15.2: 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.						
1909.8	810	Rear	10	0.859	0.855	1.00	/

**Table 15.3: SAR Measurement Variability for Body WCDMA850 (1g)**

Frequency		Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
MHz	Ch.						
4132	826.4	Rear	10	0.809	0.798	1.01	/

**Table 15.4: SAR Measurement Variability for Body WCDMA1700 (1g)**

Frequency		Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
MHz	Ch.						
1537	1712.4	Rear	10	1.07	1.02	1.02	/

**Table 15.5: 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.						
9938	1907.6	Rear	10	1.15	1.13	1.02	/

## 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
<b>Measurement system</b>										
1	Probe calibration	B	6.0	N	1	1	1	6.0	6.0	$\infty$
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	$\infty$
3	Boundary effect	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	$\infty$
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	$\infty$
5	Detection limit	B	1.0	N	1	1	1	0.6	0.6	$\infty$
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	$\infty$
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	$\infty$
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	$\infty$
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	$\infty$
10	RF ambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	$\infty$
11	Probe positioned mech. restrictions	B	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	$\infty$
12	Probe positioning with respect to phantom shell	B	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	$\infty$
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	$\infty$
<b>Test sample related</b>										
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	$\infty$
<b>Phantom and set-up</b>										
17	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	$\infty$
18	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	$\infty$
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	$\infty$
21	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521

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

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

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
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#### Measurement system

1	Probe calibration	B	6.55	N	1	1	1	6.55	6.55	$\infty$
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	$\infty$
3	Boundary effect	B	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	$\infty$
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	$\infty$
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	$\infty$
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	$\infty$
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	$\infty$
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	$\infty$
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	$\infty$
10	RF ambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	$\infty$
11	Probe positioned mech. restrictions	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	$\infty$
12	Probe positioning with respect to phantom shell	B	6.7	R	$\sqrt{3}$	1	1	3.9	3.9	$\infty$
13	Post-processing	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	$\infty$

#### 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	$\infty$

#### Phantom and set-up

17	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	$\infty$
18	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	$\infty$
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	$\infty$
21	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
	Combined standard uncertainty	$u_c = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$						10.7	10.6	257
	Expanded uncertainty (confidence interval of 95 %)	$u_e = 2u_c$						21.4	21.1	

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

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedo m
<b>Measurement system</b>										
1	Probe calibration	B	6.0	N	1	1	1	6.0	6.0	$\infty$
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	$\infty$
3	Boundary effect	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	$\infty$
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	$\infty$
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	$\infty$
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	$\infty$
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	$\infty$
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	$\infty$
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	$\infty$
10	RF ambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	$\infty$
11	Probe positioned mech. Restrictions	B	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	$\infty$
12	Probe positioning with respect to phantom shell	B	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	$\infty$
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	$\infty$
14	Fast SAR z-Approximation	B	7.0	R	$\sqrt{3}$	1	1	4.0	4.0	$\infty$
<b>Test sample related</b>										
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	$\infty$

Phantom and set-up										
18	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	$\infty$
19	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	$\infty$
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	$\infty$
22	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						10.4	10.3	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						20.8	20.6	

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

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedo m
<b>Measurement system</b>										
1	Probe calibration	B	6.55	N	1	1	1	6.55	6.55	$\infty$
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	$\infty$
3	Boundary effect	B	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	$\infty$
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	$\infty$
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	$\infty$
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	$\infty$
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	$\infty$
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	$\infty$
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	$\infty$
10	RF ambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	$\infty$
11	Probe positioned mech. Restrictions	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	$\infty$
12	Probe positioning with respect to phantom shell	B	6.7	R	$\sqrt{3}$	1	1	3.9	3.9	$\infty$
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	$\infty$
14	Fast SAR z-Approximation	B	14.0	R	$\sqrt{3}$	1	1	8.1	8.1	$\infty$

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

## 17 MAIN TEST INSTRUMENTS

Table 17.1: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	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	E-field Probe	SPEAG EX3DV4	3617	August 26, 2015	One year
08	DAE	SPEAG DAE4	777	August 26, 2015	One year
09	Dipole Validation Kit	SPEAG D835V2	4d069	July 23, 2015	One year
10	Dipole Validation Kit	SPEAG D1750V2	1003	July 16, 2015	One year
11	Dipole Validation Kit	SPEAG D1900V2	5d101	July 23, 2015	One year
12	Dipole Validation Kit	SPEAG D2450V2	853	July 24, 2015	One year

\*\*\*END OF REPORT BODY\*\*\*

## ANNEX A Graph Results

### 850 Left Cheek High

Date: 2016-4-25

Electronics: DAE4 Sn777

Medium: Head 850 MHz

Medium parameters used (interpolated):  $f = 848.8$  MHz;  $\sigma = 0.929$  mho/m;  $\epsilon_r = 43.022$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°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 (61x101x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.761 W/kg

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

Reference Value = 8.915 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.863 W/kg

**SAR(1 g) = 0.700 W/kg; SAR(10 g) = 0.542 W/kg**

Maximum value of SAR (measured) = 0.728 W/kg

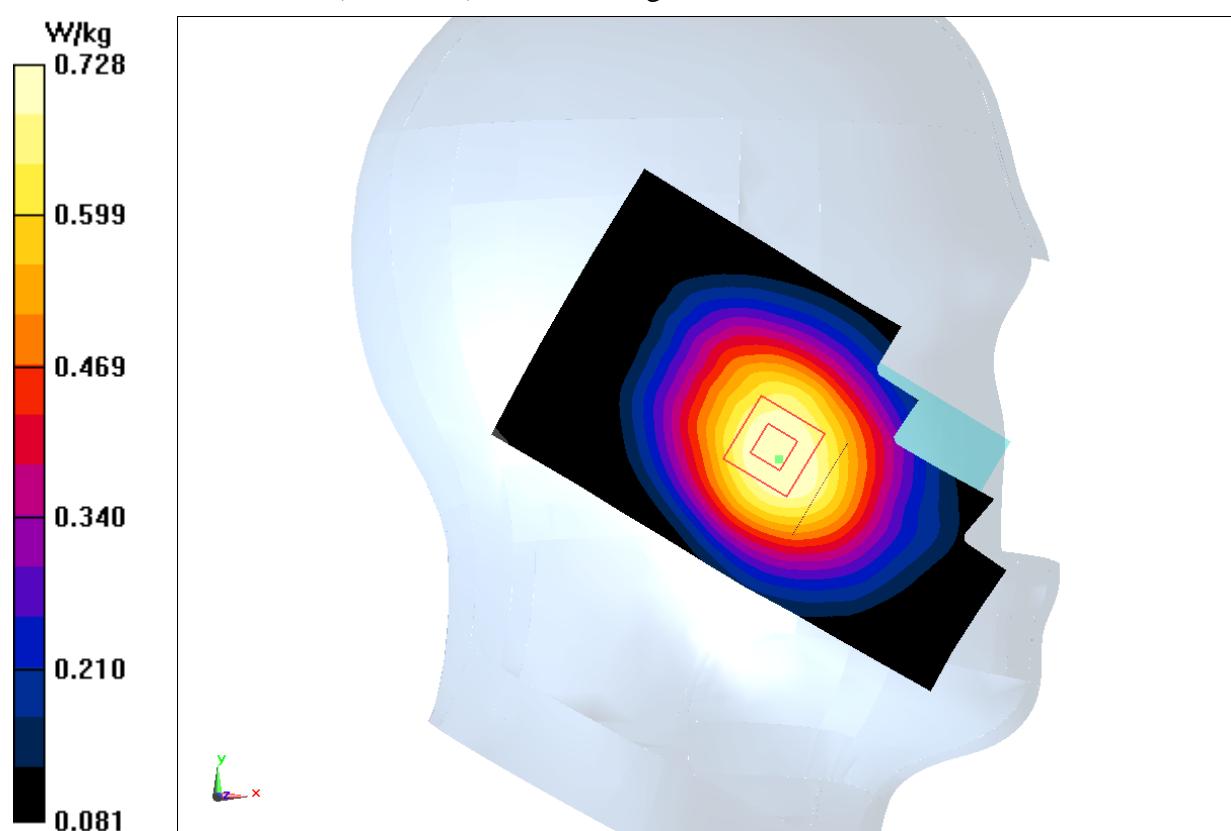
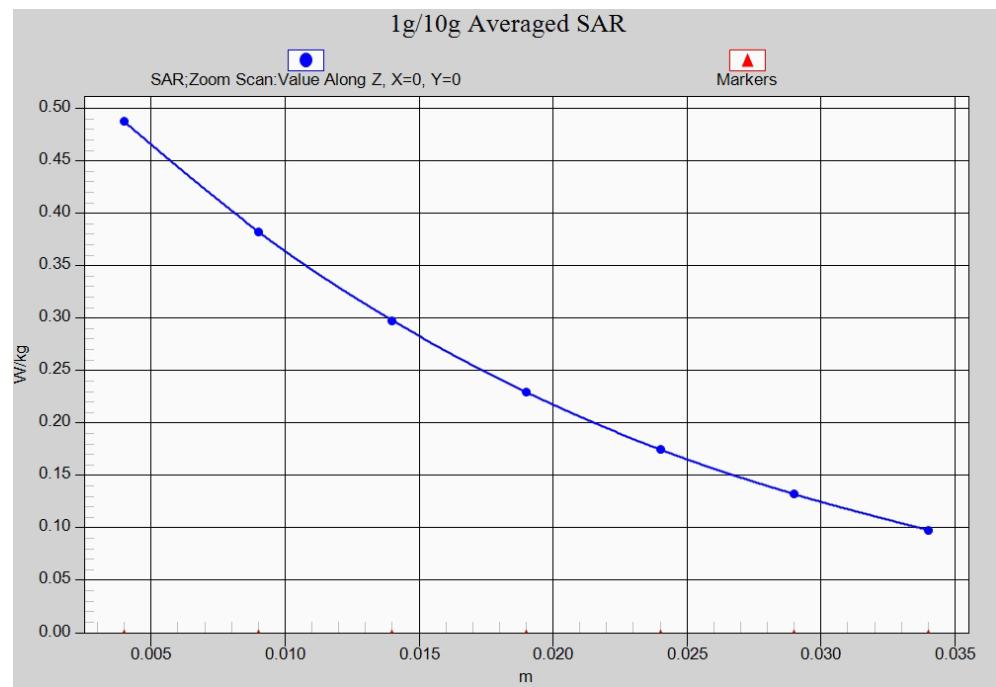


Fig.1 850MHz



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

## 850 Body Rear High

Date: 2016-4-25

Electronics: DAE4 Sn777

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 848.8$  MHz;  $\sigma = 0.976$  mho/m;  $\epsilon_r = 56.311$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: GSM 850 GPRS Frequency: 848.8 MHz Duty Cycle: 1:8

Probe: EX3DV4 - SN3617 ConvF(9.71, 9.71, 9.71)

**Area Scan (101x71x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.947 W/kg

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

Reference Value = 30.59 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.14 W/kg

**SAR(1 g) = 0.859 W/kg; SAR(10 g) = 0.635 W/kg**

Maximum value of SAR (measured) = 0.952 W/kg

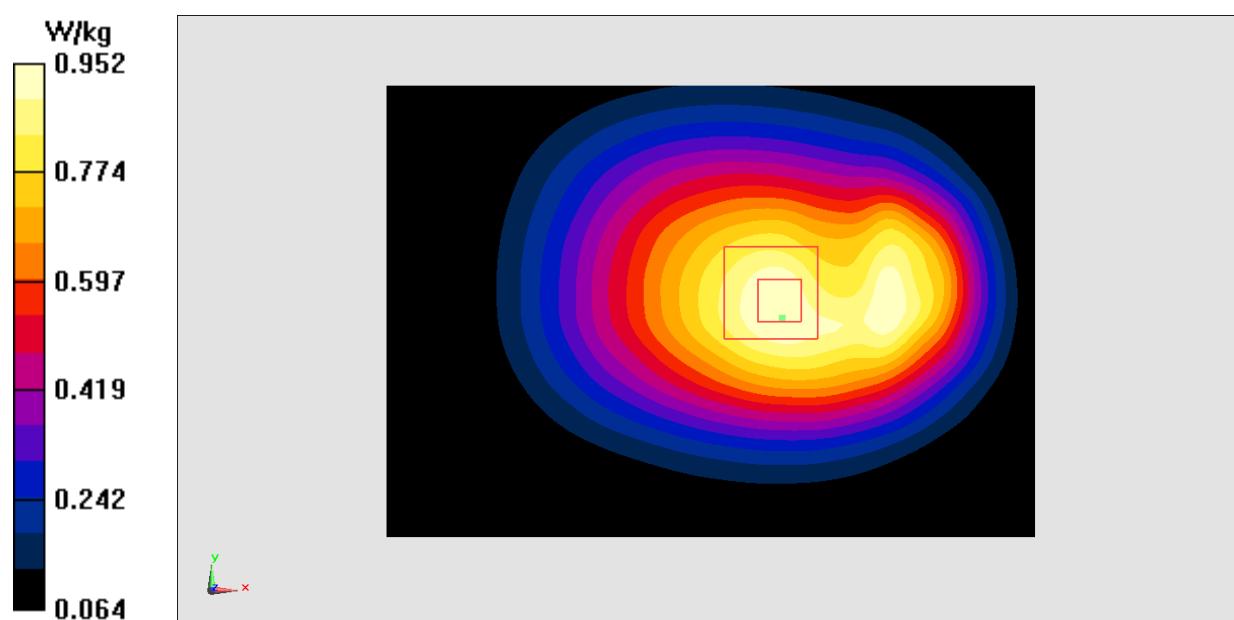
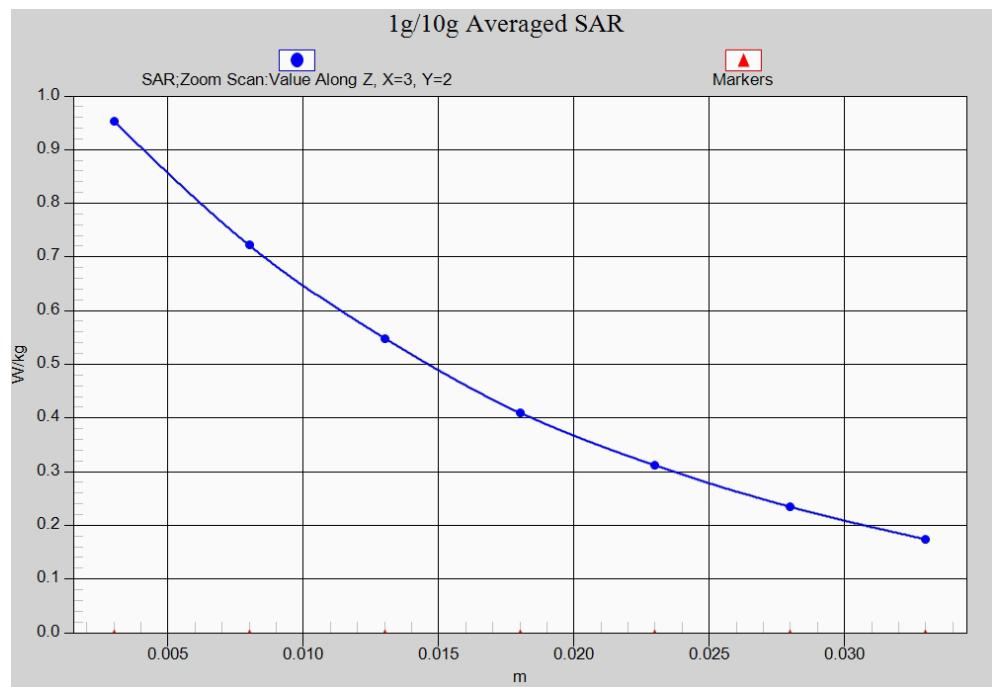


Fig.2 850 MHz



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

## 1900 Left Cheek High

Date: 2016-5-5

Electronics: DAE4 Sn777

Medium: Head 1900 MHz

Medium parameters used:  $f = 1909.8 \text{ MHz}$ ;  $\sigma = 1.436 \text{ mho/m}$ ;  $\epsilon_r = 38.861$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.9^\circ\text{C}$  Liquid Temperature:  $22.5^\circ\text{C}$

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 (71x101x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.542 W/kg

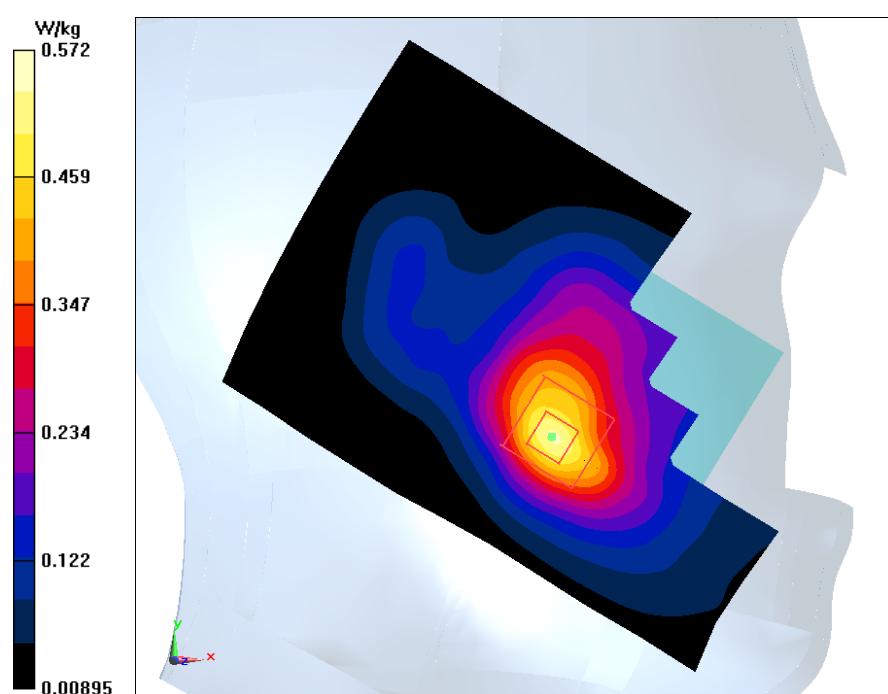
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 7.333 V/m; Power Drift = -0.07 dB

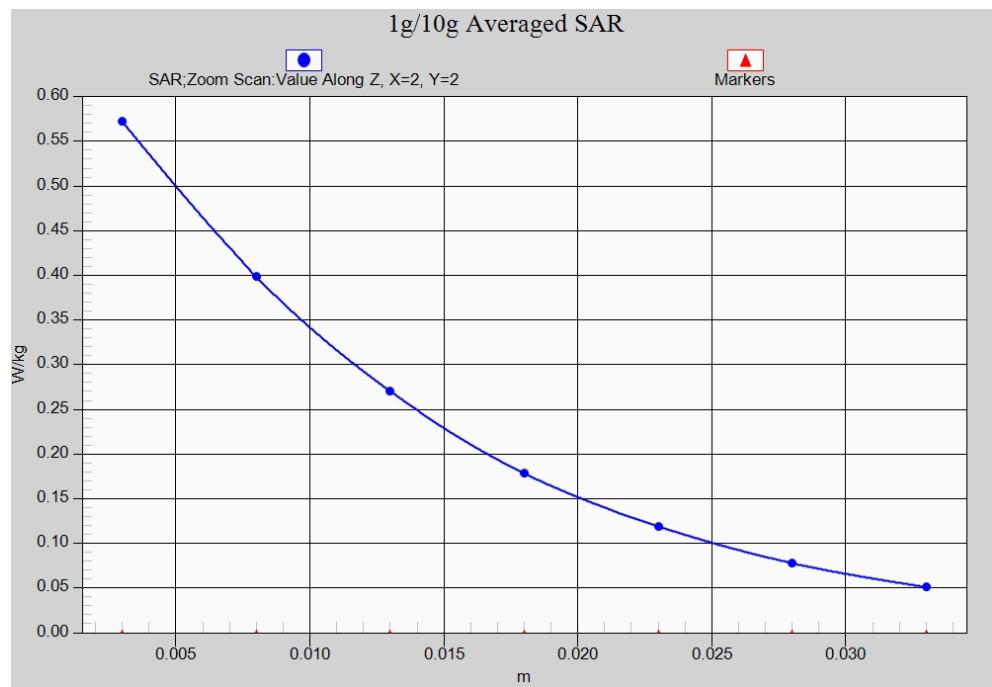
Peak SAR (extrapolated) = 0.723 W/kg

**SAR(1 g) = 0.487 W/kg; SAR(10 g) = 0.299 W/kg**

Maximum value of SAR (measured) = 0.572 W/kg



**Fig.3 1900 MHz**



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

## 1900 Body Rear High

Date: 2016-5-5

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used:  $f = 1909.8 \text{ MHz}$ ;  $\sigma = 1.552 \text{ mho/m}$ ;  $\epsilon_r = 51.91$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.9^\circ\text{C}$  Liquid Temperature:  $22.5^\circ\text{C}$

Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:4

Probe: EX3DV4 - SN3617 ConvF(7.74, 7.74, 7.74)

**Area Scan (101x71x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$

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

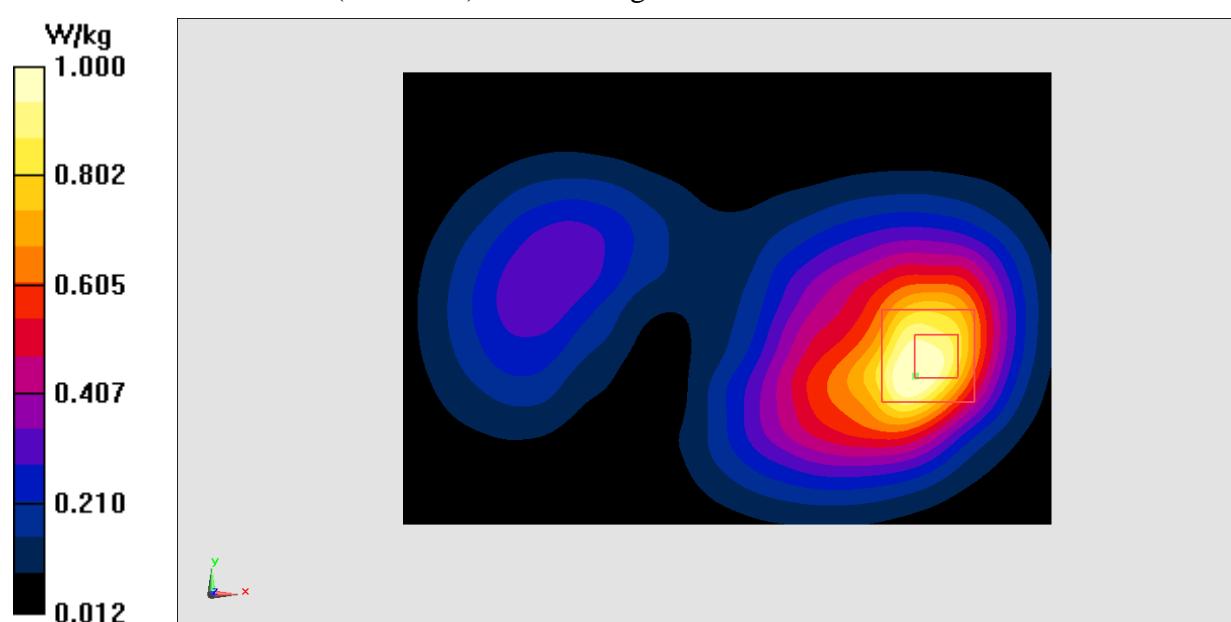
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 13.43 V/m; Power Drift = -0.14 dB

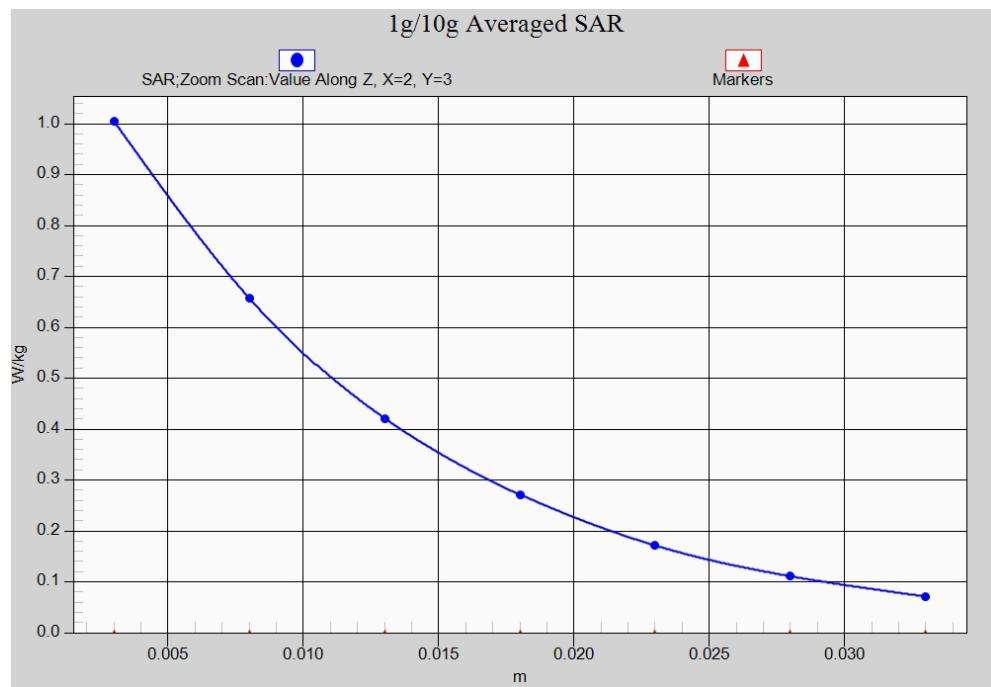
Peak SAR (extrapolated) = 1.36 W/kg

**SAR(1 g) = 0.859 W/kg; SAR(10 g) = 0.503 W/kg**

Maximum value of SAR (measured) = 1.00 W/kg



**Fig.4 1900 MHz**



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

## WCDMA 850 Left Cheek Low

Date: 2016-4-25

Electronics: DAE4 Sn777

Medium: Head 850 MHz

Medium parameters used (interpolated):  $f = 826.4$  MHz;  $\sigma = 0.919$  mho/m;  $\epsilon_r = 42.695$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(9.56, 9.56, 9.56)

**Area Scan (61x101x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.651 W/kg

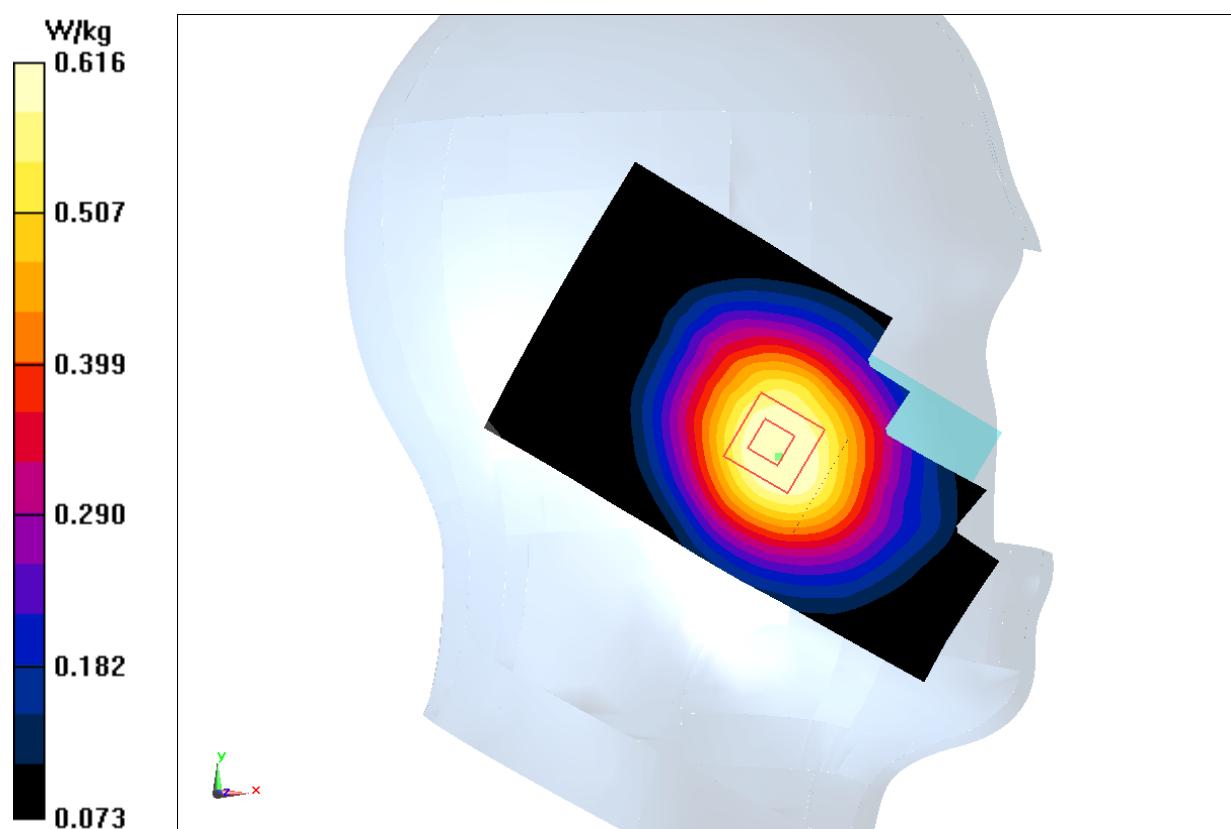
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.904 V/m; Power Drift = 0.07 dB

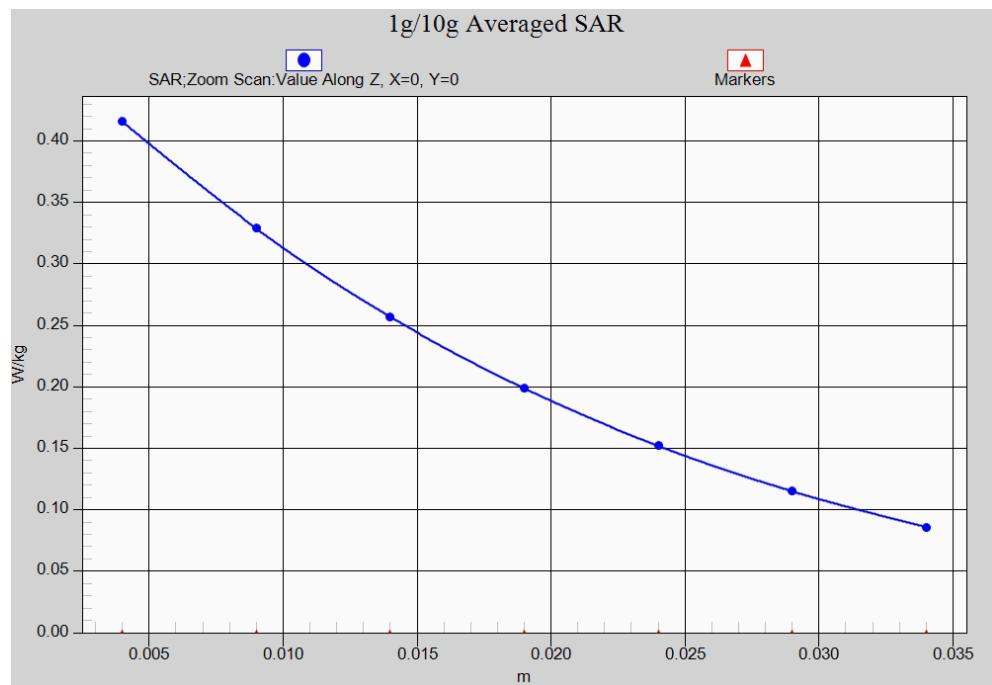
Peak SAR (extrapolated) = 0.727 W/kg

**SAR(1 g) = 0.596 W/kg; SAR(10 g) = 0.461 W/kg**

Maximum value of SAR (measured) = 0.616 W/kg



**Fig.5 WCDMA 850**



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

## WCDMA 850 Body Rear Low

Date: 2016-4-25

Electronics: DAE4 Sn777

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 826.4$  MHz;  $\sigma = 0.926$  mho/m;  $\epsilon_r = 55.16$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(9.71, 9.71, 9.71)

**Area Scan (101x61x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.896 W/kg

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

Reference Value = 25.49 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.03 W/kg

**SAR(1 g) = 0.809 W/kg; SAR(10 g) = 0.608 W/kg**

Maximum value of SAR (measured) = 0.849 W/kg

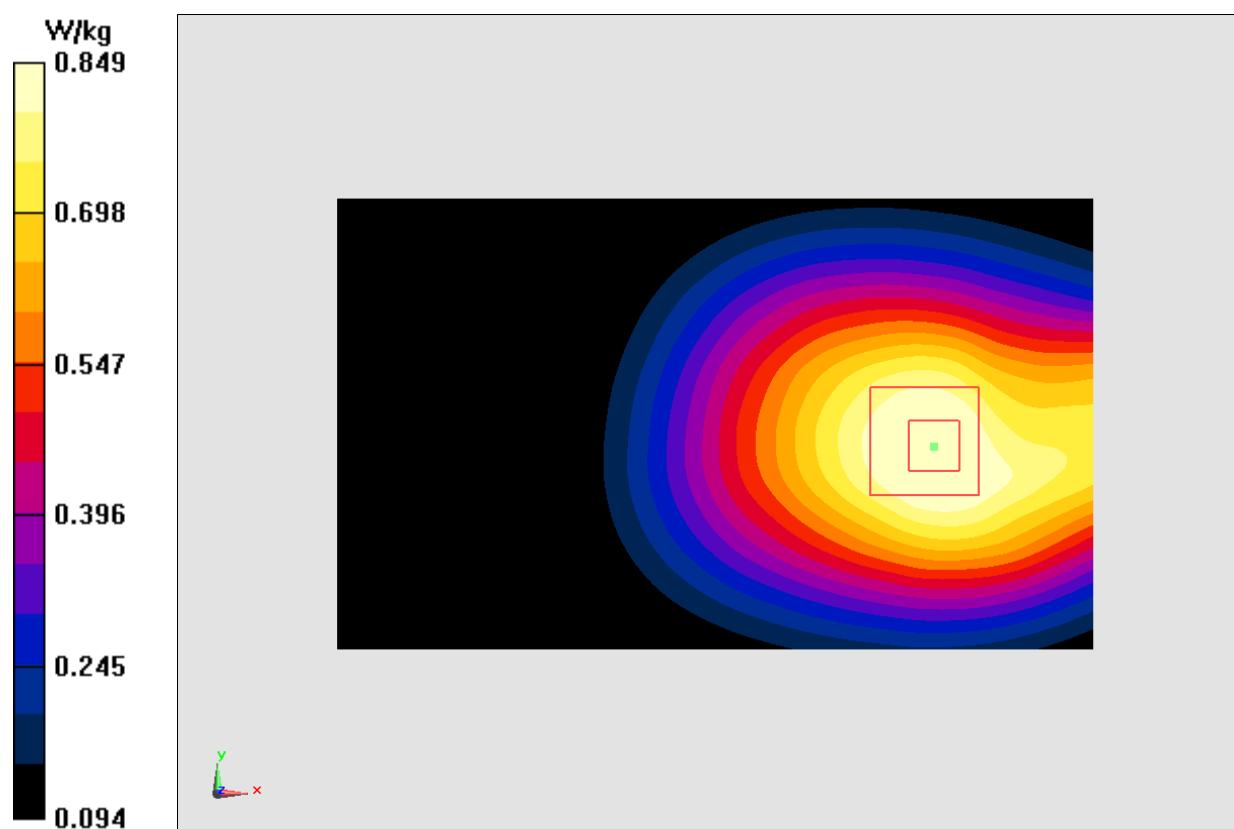
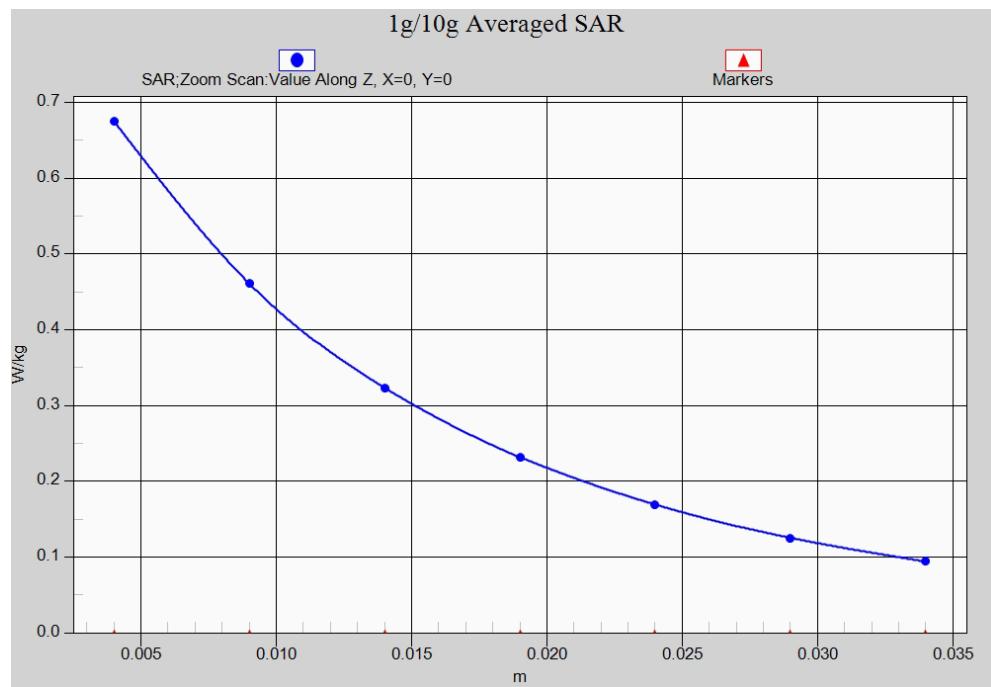


Fig.6 WCDMA 850



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

## WCDMA 1700 Right Cheek High

Date: 2016-4-26

Electronics: DAE4 Sn777

Medium: Head 1750 MHz

Medium parameters used (interpolated):  $f = 1738$  MHz;  $\sigma = 1.349$  mho/m;  $\epsilon_r = 40.46$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: WCDMA 1750 Frequency: 1738 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(8.34, 8.34, 8.34)

**Area Scan (61x111x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.667 W/kg

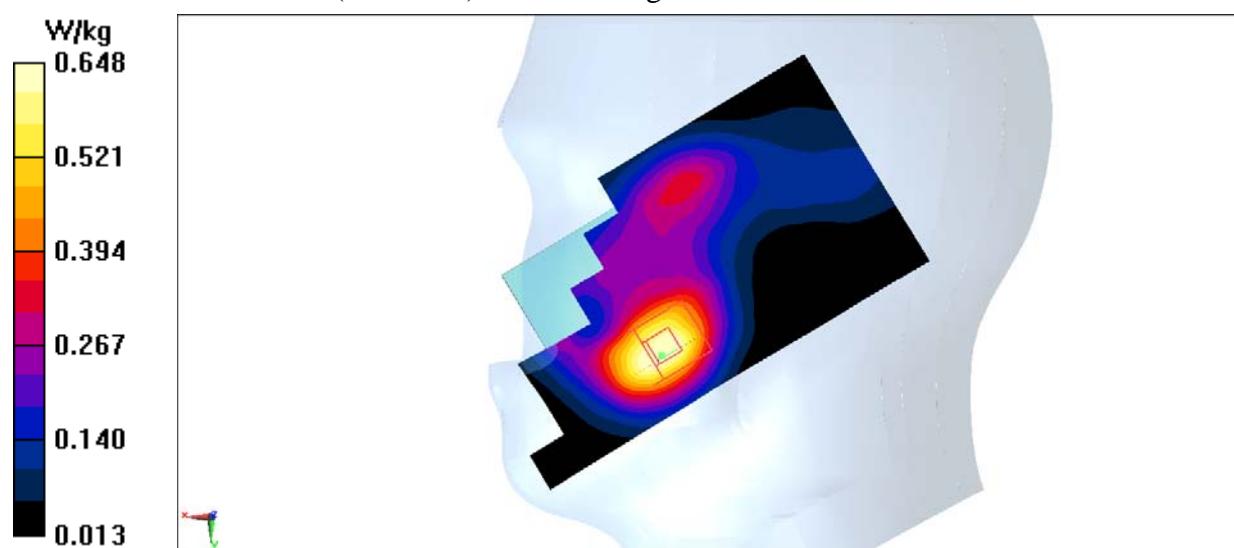
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.518 V/m; Power Drift = 0.02 dB

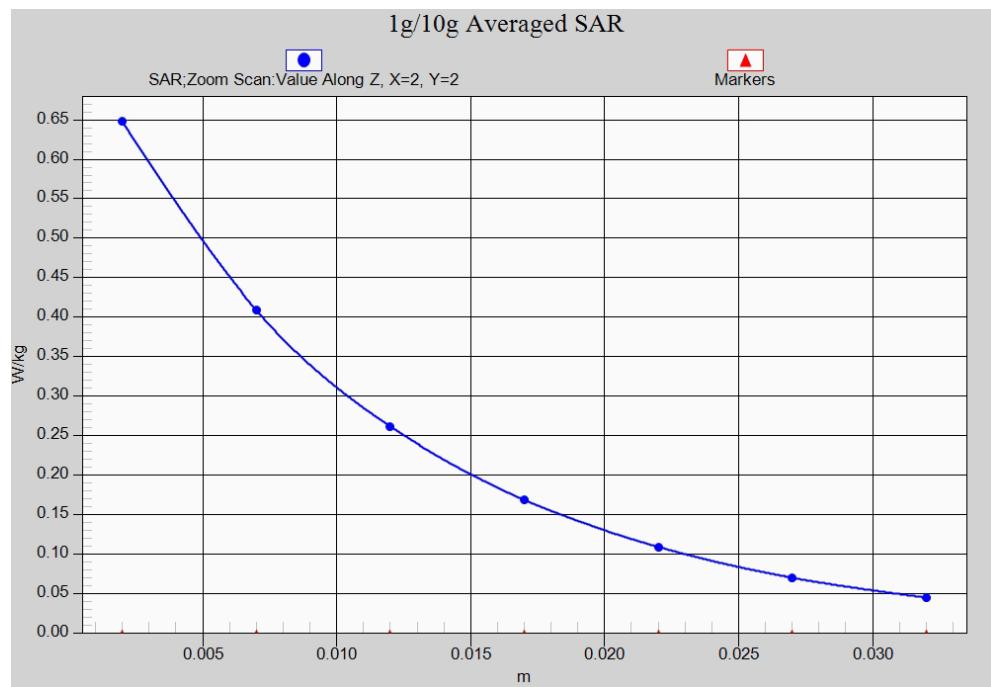
Peak SAR (extrapolated) = 0.804 W/kg

**SAR(1 g) = 0.512 W/kg; SAR(10 g) = 0.305 W/kg**

Maximum value of SAR (measured) = 0.648 W/kg



**Fig.7 WCDMA1700**



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

## WCDMA 1700 Body Rear Low

Date: 2016-4-26

Electronics: DAE4 Sn777

Medium: Body 1750 MHz

Medium parameters used:  $f = 1712.4$  MHz;  $\sigma = 1.331$  mho/m;  $\epsilon_r = 55.66$ ;  $\rho = 1000$  kg/m $^3$

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: WCDMA 1750 Frequency: 1712.4 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(7.96, 7.96, 7.96)

**Area Scan (101x71x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.32 W/kg

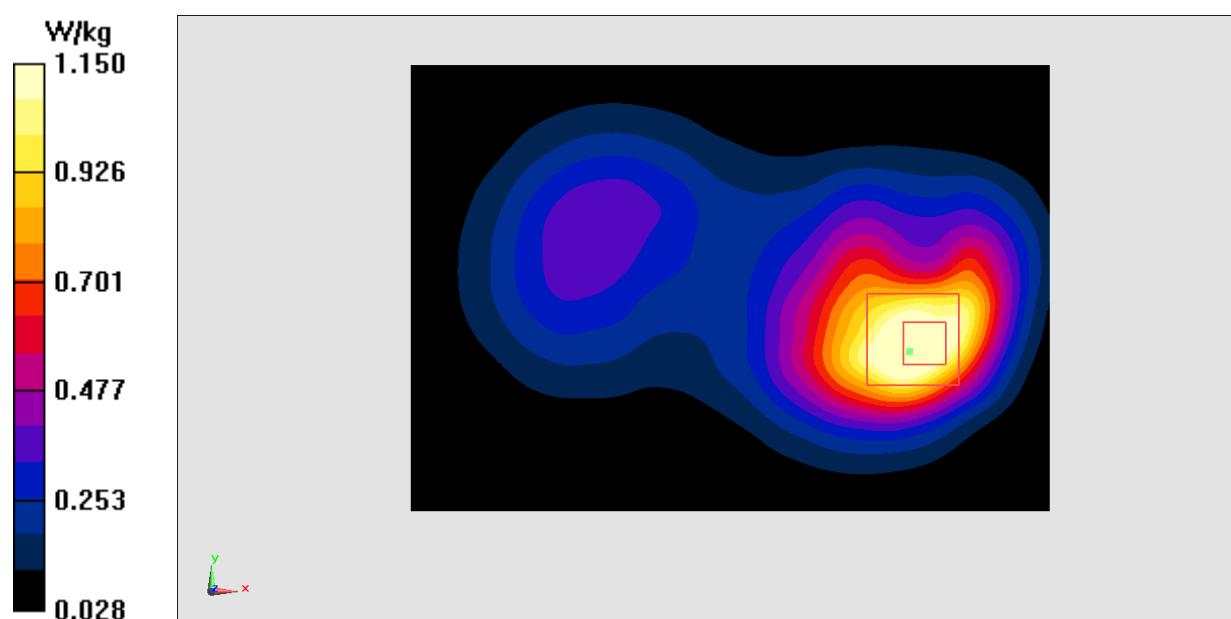
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.72 V/m; Power Drift = -0.11 dB

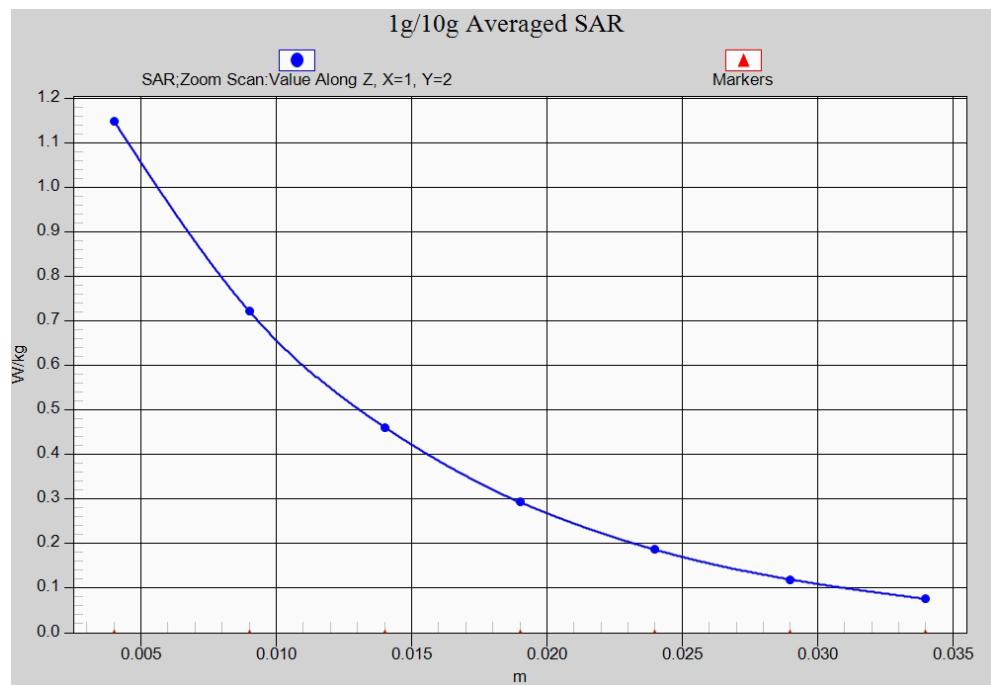
Peak SAR (extrapolated) = 1.74 W/kg

**SAR(1 g) = 1.07 W/kg; SAR(10 g) = 0.632 W/kg**

Maximum value of SAR (measured) = 1.15 W/kg



**Fig.8 WCDMA1700**



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

## WCDMA 1900 Left Cheek Low

Date: 2016-5-5

Electronics: DAE4 Sn777

Medium: Head 1900 MHz

Medium parameters used (interpolated):  $f = 1852.4$  MHz;  $\sigma = 1.351$  mho/m;  $\epsilon_r = 40.21$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: WCDMA 1900 Frequency: 1852.4 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(8.07, 8.07, 8.07)

**Area Scan (71x101x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.690 W/kg

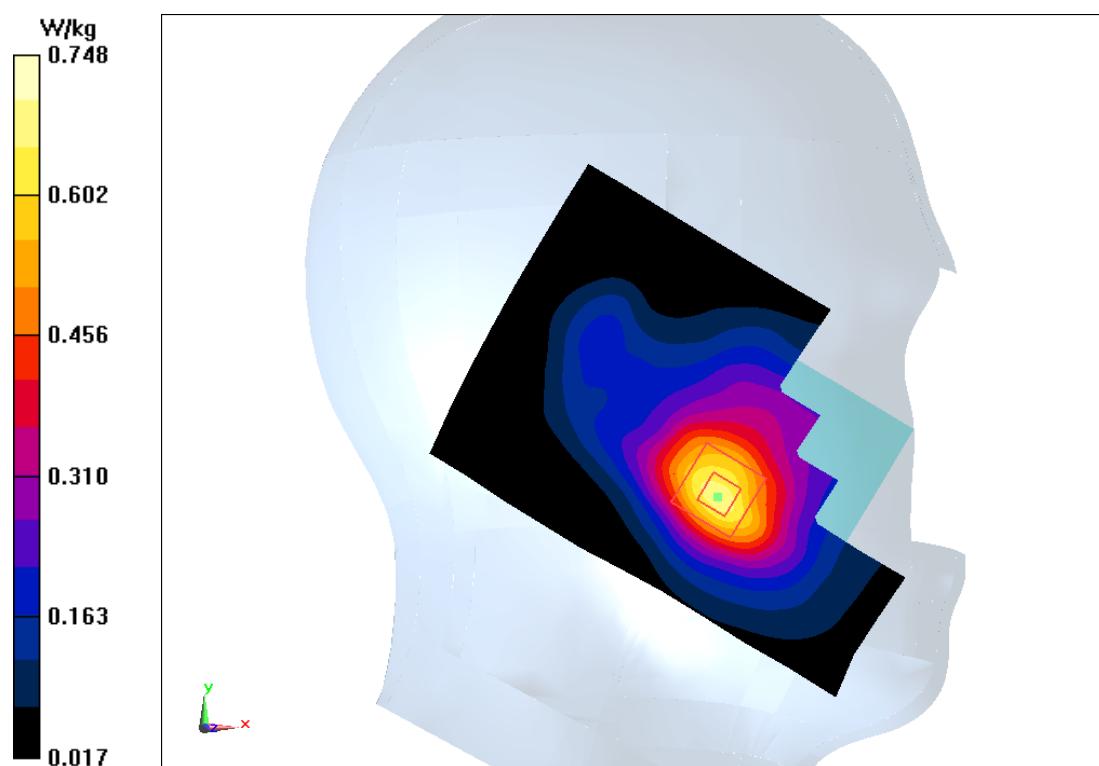
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.516 V/m; Power Drift = 0.12 dB

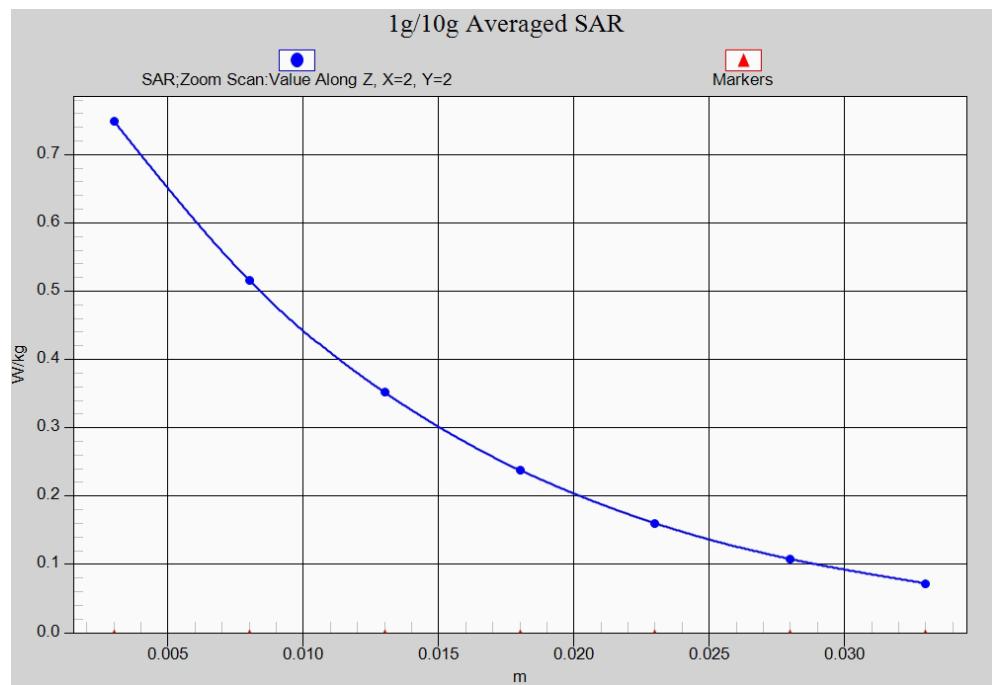
Peak SAR (extrapolated) = 0.943 W/kg

**SAR(1 g) = 0.642 W/kg; SAR(10 g) = 0.403 W/kg**

Maximum value of SAR (measured) = 0.748 W/kg



**Fig.9 WCDMA1900**



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

## WCDMA 1900 Body Rear High

Date: 2016-5-5

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used:  $f = 1907.6 \text{ MHz}$ ;  $\sigma = 1.562 \text{ mho/m}$ ;  $\epsilon_r = 51.591$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.9^\circ\text{C}$  Liquid Temperature:  $22.5^\circ\text{C}$

Communication System: WCDMA 1900 Frequency: 1907.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(7.74, 7.74, 7.74)

**Area Scan (101x71x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 1.48 W/kg

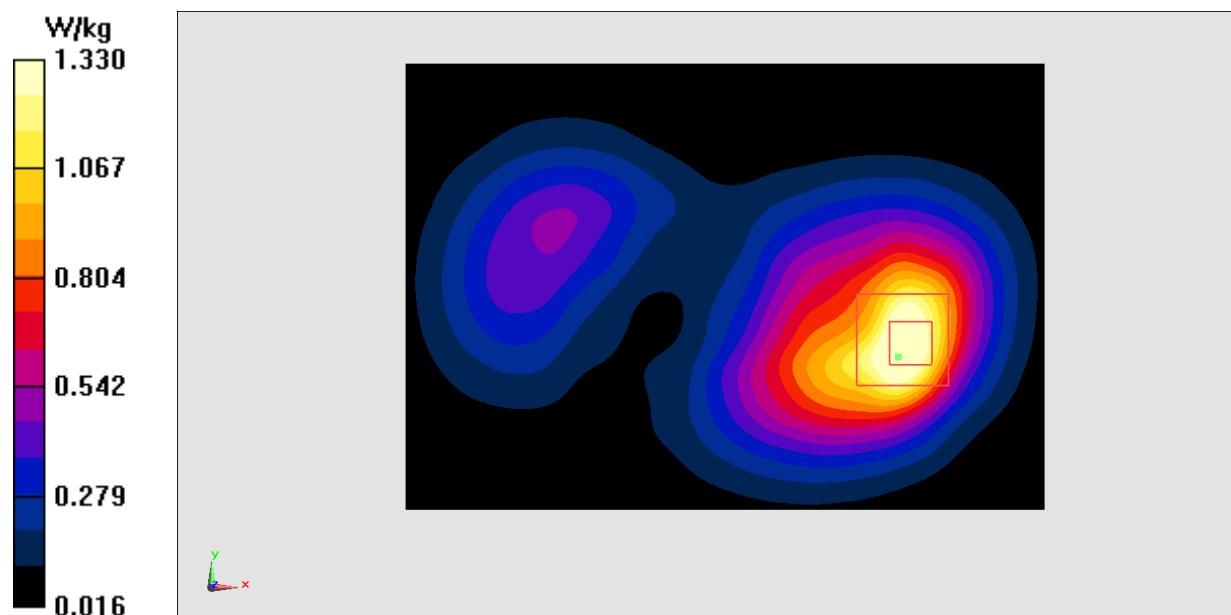
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 14.88 V/m; Power Drift = -0.19 dB

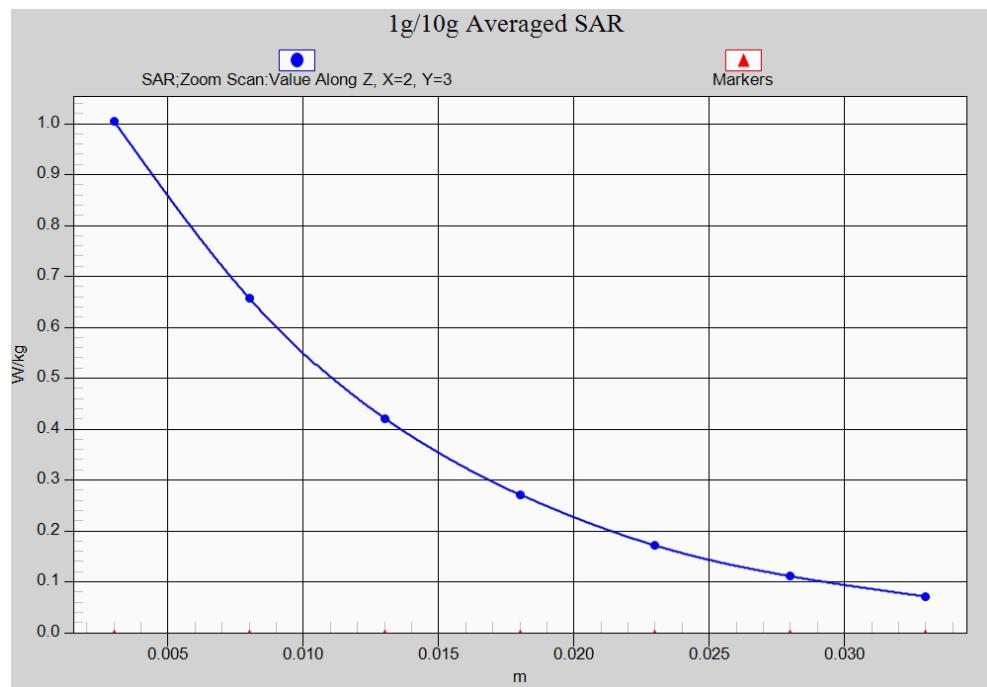
Peak SAR (extrapolated) = 1.82 W/kg

**SAR(1 g) = 1.15 W/kg; SAR(10 g) = 0.683 W/kg**

Maximum value of SAR (measured) = 1.33 W/kg



**Fig.10 WCDMA1900**



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

## Wifi 802.11b Right Cheek Channel 6

Date: 2016-5-6

Electronics: DAE4 Sn777

Medium: Head 2450 MHz

Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.801$  mho/m;  $\epsilon_r = 39.261$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: WLan 2450 Frequency: 2437 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(7.24, 7.24, 7.24)

**Area Scan (81x121x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.82 W/kg

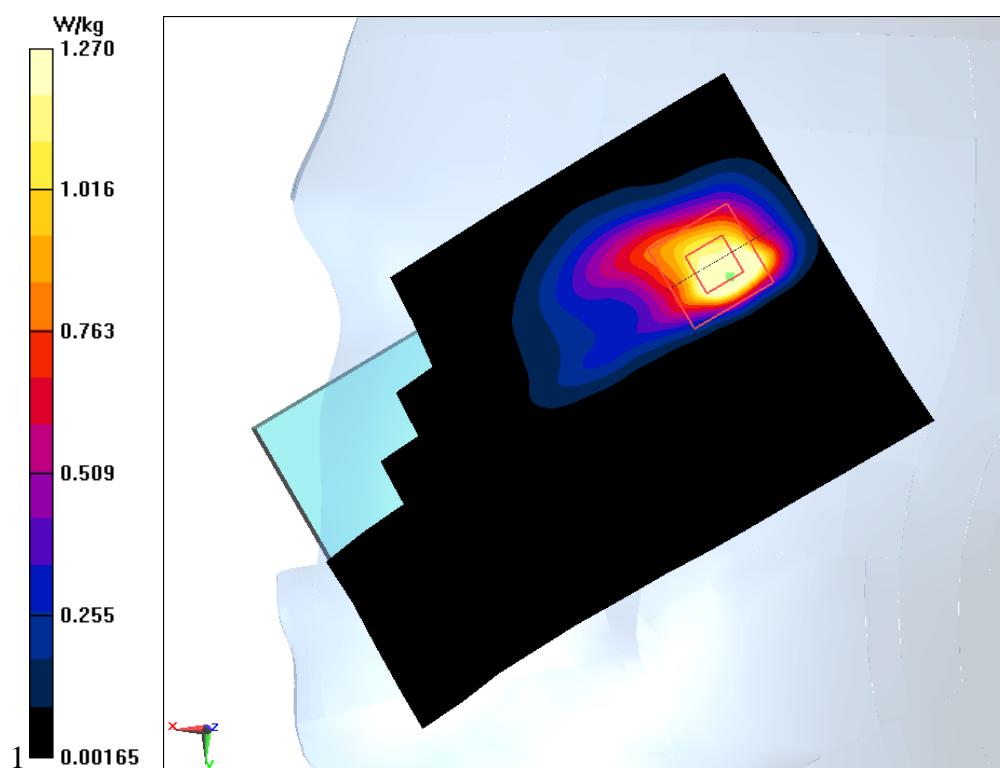
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 20.36 V/m; Power Drift = 0.09 dB

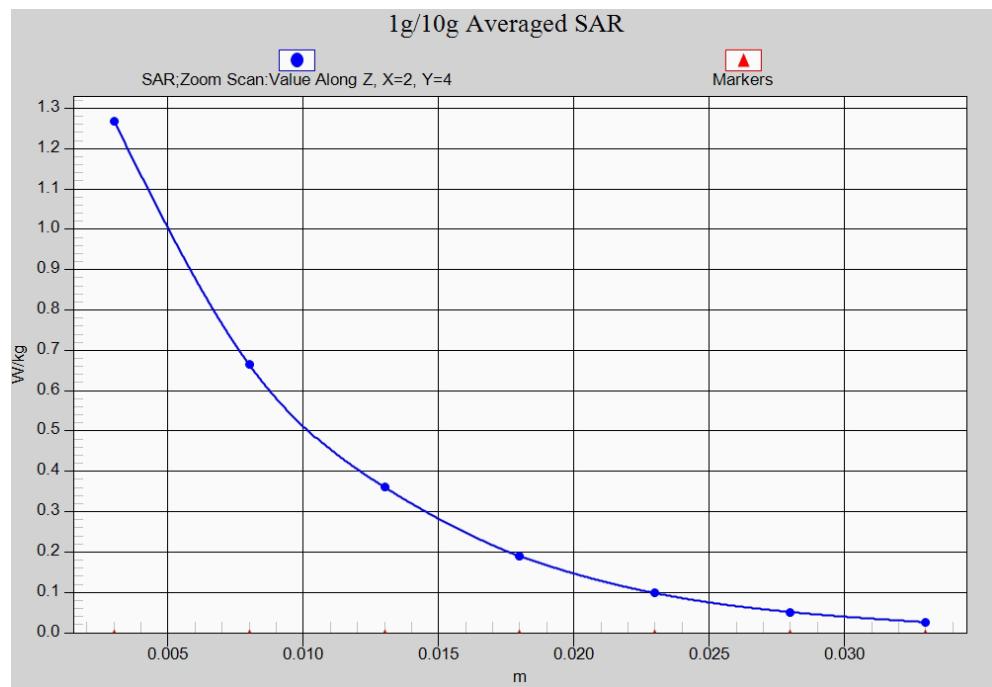
Peak SAR (extrapolated) = 1.94 W/kg

**SAR(1 g) = 0.990 W/kg; SAR(10 g) = 0.486 W/kg**

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



**Fig.11 2450 MHz**



**Fig. 11-1 Z-Scan at power reference point (2450 MHz)**

## Wifi 802.11b Body Rear Channel 11

Date: 2016-5-6

Electronics: DAE4 Sn777

Medium: Body 2450 MHz

Medium parameters used (interpolated):  $f = 2462$  MHz;  $\sigma = 1.998$  mho/m;  $\epsilon_r = 52.58$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: WLan 2450 Frequency: 2462MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(7.35, 7.35, 7.35)

**Area Scan (121x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.326 W/kg

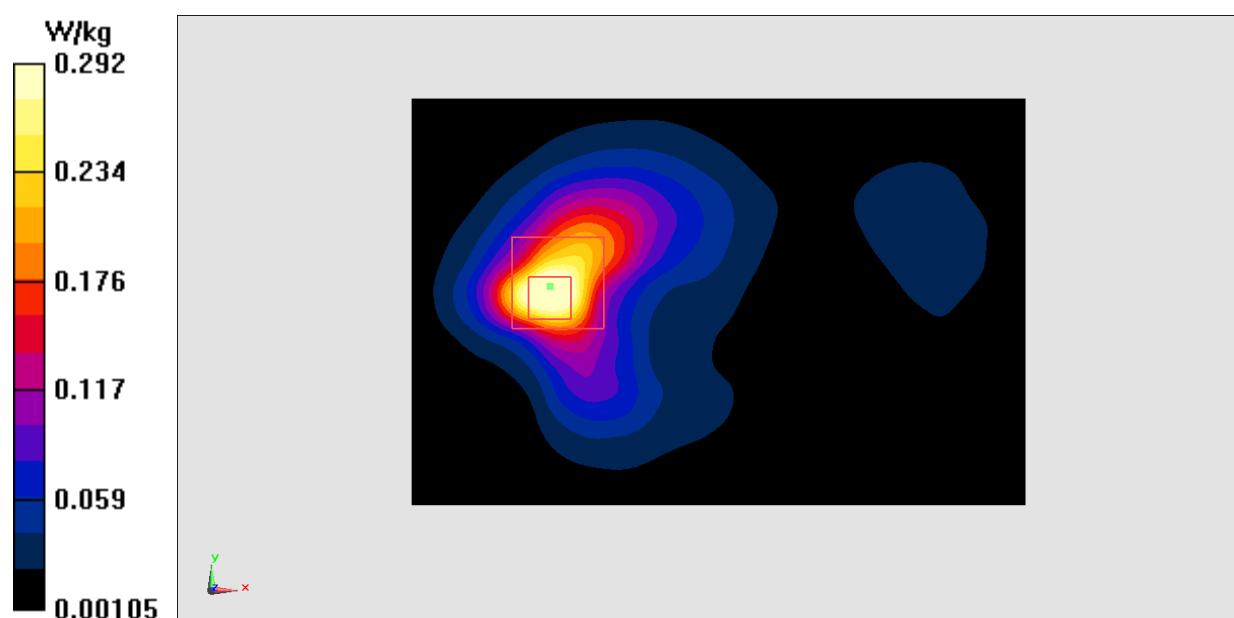
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.417 V/m; Power Drift = 0.18 dB

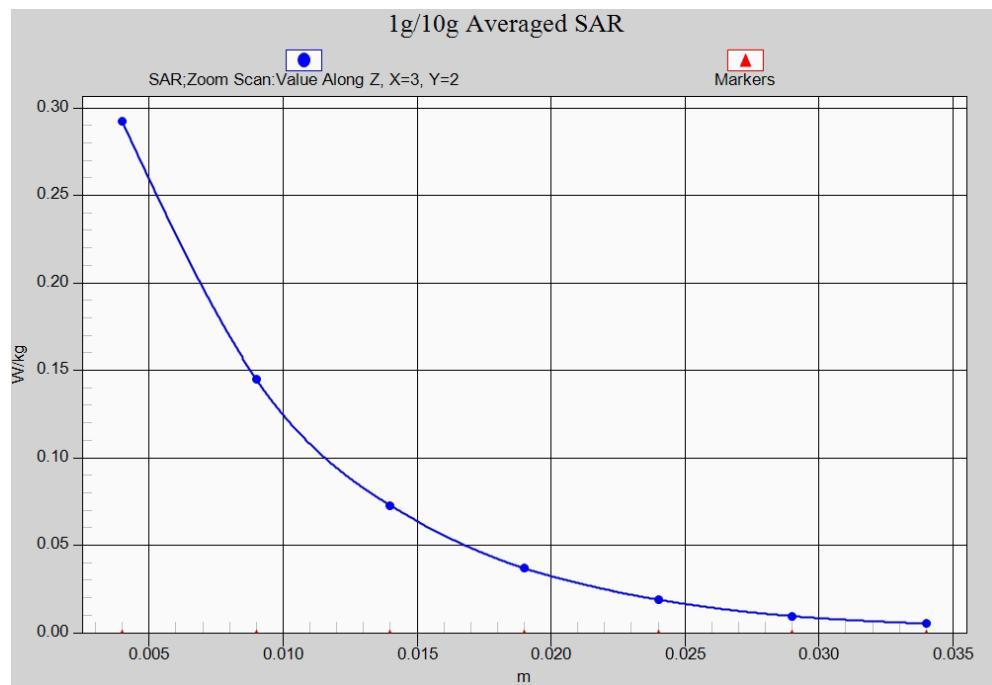
Peak SAR (extrapolated) = 0.533 W/kg

**SAR(1 g) = 0.250 W/kg; SAR(10 g) = 0.117 W/kg**

Maximum value of SAR (measured) = 0.292 W/kg



**Fig.12 2450 MHz**



**Fig. 12-1 Z-Scan at power reference point (2450 MHz)**