

**Table 14.1-23: SAR Values(LTE Band30 - Head)**

Frequency		Mode	Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
27710	2310	1RB_High	Left	Touch	/	24.21	24.5	0.062	<b>0.07</b>	0.107	<b>0.11</b>	0.08
27710	2310	1RB_High	Left	Tilt	/	24.21	24.5	0.047	<b>0.05</b>	0.071	<b>0.08</b>	0.07
27710	2310	1RB_High	Right	Touch	Fig.23	24.21	24.5	0.093	<b>0.10</b>	0.165	<b>0.18</b>	0.08
27710	2310	1RB_High	Right	Tilt	/	24.21	24.5	0.054	<b>0.06</b>	0.088	<b>0.09</b>	-0.01
27710	2310	25RB_High	Left	Touch	/	23.06	23.5	0.048	<b>0.05</b>	0.084	<b>0.09</b>	-0.04
27710	2310	25RB_High	Left	Tilt	/	23.06	23.5	0.032	<b>0.04</b>	0.052	<b>0.06</b>	0.02
27710	2310	25RB_High	Right	Touch	/	23.06	23.5	0.057	<b>0.06</b>	0.101	<b>0.11</b>	0.07
27710	2310	25RB_High	Right	Tilt	/	23.06	23.5	0.042	<b>0.05</b>	0.070	<b>0.08</b>	0.03

Note1: The LTE mode is QPSK\_10MHz.

**Table 14.1-24: SAR Values (LTE Band30 - Body)**

Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
27710	2310	1RB_High	Front	/	24.21	24.5	0.269	<b>0.29</b>	0.445	<b>0.48</b>	0.03
27710	2310	1RB_High	Rear	/	24.21	24.5	0.299	<b>0.32</b>	0.486	<b>0.52</b>	0.15
27710	2310	1RB_High	Left	/	24.21	24.5	0.144	<b>0.15</b>	0.284	<b>0.30</b>	0.02
27710	2310	1RB_High	Right	/	24.21	24.5	0.024	<b>0.03</b>	0.038	<b>0.04</b>	-0.04
27710	2310	1RB_High	Bottom	Fig.24	24.21	24.5	0.446	<b>0.48</b>	0.796	<b>0.85</b>	0.05
27710	2310	25RB_High	Front	/	23.06	23.5	0.209	<b>0.23</b>	0.345	<b>0.38</b>	0.11
27710	2310	25RB_High	Rear	/	23.06	23.5	0.228	<b>0.25</b>	0.370	<b>0.41</b>	-0.03
27710	2310	25RB_High	Left	/	23.06	23.5	0.110	<b>0.12</b>	0.217	<b>0.24</b>	0.05
27710	2310	25RB_High	Right	/	23.06	23.5	0.017	<b>0.02</b>	0.030	<b>0.03</b>	0.01
27710	2310	25RB_High	Bottom	/	23.06	23.5	0.332	<b>0.37</b>	0.591	<b>0.65</b>	0.02

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

Note2: The LTE mode is QPSK\_10MHz.

**Table 14.1-25: SAR Values(LTE Band38 - Head)**

Frequency		Mode	Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
38150	2610	1RB_Mid	Left	Touch	/	23.82	24	0.036	<b>0.04</b>	0.067	<b>0.07</b>	0.09
38150	2610	1RB_Mid	Left	Tilt	/	23.82	24	0.020	<b>0.02</b>	0.039	<b>0.04</b>	0.01
38150	2610	1RB_Mid	Right	Touch	Fig.25	23.82	24	0.044	<b>0.05</b>	0.083	<b>0.09</b>	0.06
38150	2610	1RB_Mid	Right	Tilt	/	23.82	24	0.025	<b>0.03</b>	0.049	<b>0.05</b>	-0.03
38150	2610	50RB_Mid	Left	Touch	/	22.68	23	0.028	<b>0.03</b>	0.052	<b>0.06</b>	0.01
38150	2610	50RB_Mid	Left	Tilt	/	22.68	23	0.013	<b>0.01</b>	0.031	<b>0.03</b>	-0.06
38150	2610	50RB_Mid	Right	Touch	/	22.68	23	0.039	<b>0.04</b>	0.076	<b>0.08</b>	-0.04
38150	2610	50RB_Mid	Right	Tilt	/	22.68	23	0.024	<b>0.03</b>	0.048	<b>0.05</b>	0.01

Note1: The LTE mode is QPSK\_20MHz.

**Table 14.1-26: SAR Values (LTE Band38 - Body)**

Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
38150	2610	1RB_Mid	Front	/	23.82	24	0.167	<b>0.17</b>	0.298	<b>0.31</b>	0.03
38150	2610	1RB_Mid	Rear	/	23.82	24	0.183	<b>0.19</b>	0.323	<b>0.34</b>	0.12
38150	2610	1RB_Mid	Left	/	23.82	24	0.081	<b>0.08</b>	0.163	<b>0.17</b>	0.06
38150	2610	1RB_Mid	Bottom	Fig.26	23.82	24	0.345	<b>0.36</b>	0.672	<b>0.70</b>	-0.03
38150	2610	50RB_Mid	Front	/	22.68	23	0.142	<b>0.15</b>	0.255	<b>0.27</b>	0.05
38150	2610	50RB_Mid	Rear	/	22.68	23	0.146	<b>0.16</b>	0.260	<b>0.28</b>	0.15
38150	2610	50RB_Mid	Left	/	22.68	23	0.068	<b>0.07</b>	0.139	<b>0.15</b>	0.02
38150	2610	50RB_Mid	Bottom	/	22.68	23	0.282	<b>0.30</b>	0.550	<b>0.59</b>	-0.11

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

Note2: The LTE mode is QPSK\_20MHz.

**Table 14.1-27: SAR Values(LTE Band41 - Head)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C						
Frequency		Mode	Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
41490	2680	1RB_High	Left	Touch	/	23.79	24	0.028	<b>0.03</b>	0.053	<b>0.06</b>	-0.12
41490	2680	1RB_High	Left	Tilt	/	23.79	24	0.016	<b>0.02</b>	0.026	<b>0.03</b>	0.05
41490	2680	1RB_High	Right	Touch	Fig.27	23.79	24	0.041	<b>0.04</b>	0.080	<b>0.08</b>	0.04
41490	2680	1RB_High	Right	Tilt	/	23.79	24	0.025	<b>0.03</b>	0.048	<b>0.05</b>	-0.08
41490	2680	50RB_Mid	Left	Touch	/	22.68	23	0.020	<b>0.02</b>	0.035	<b>0.04</b>	0.05
41490	2680	50RB_Mid	Left	Tilt	/	22.68	23	0.012	<b>0.01</b>	0.020	<b>0.02</b>	0.02
41490	2680	50RB_Mid	Right	Touch	/	22.68	23	0.032	<b>0.03</b>	0.061	<b>0.07</b>	0.01
41490	2680	50RB_Mid	Right	Tilt	/	22.68	23	0.019	<b>0.02</b>	0.032	<b>0.03</b>	-0.14

Note1: The LTE mode is QPSK\_20MHz.

**Table 14.1-28: SAR Values (LTE Band41 - Body)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C					
Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
41490	2680	1RB_High	Front	/	23.79	24	0.186	<b>0.20</b>	0.345	<b>0.36</b>	0.13
41490	2680	1RB_High	Rear	/	23.79	24	0.278	<b>0.29</b>	0.446	<b>0.47</b>	0.14
41490	2680	1RB_High	Left	/	23.79	24	0.083	<b>0.09</b>	0.175	<b>0.18</b>	0.05
41490	2680	1RB_High	Bottom	/	23.79	24	0.399	<b>0.42</b>	0.804	<b>0.84</b>	0.07
41055	2636.5	1RB_High	Bottom	/	23.42	24	0.390	<b>0.45</b>	0.778	<b>0.89</b>	-0.02
40620	2593	1RB_High	Bottom	/	23.01	24	0.356	<b>0.45</b>	0.702	<b>0.88</b>	-0.09
40185	2549.5	1RB_High	Bottom	/	22.56	24	0.387	<b>0.54</b>	0.757	<b>1.05</b>	0.06
39750	2506	1RB_High	Bottom	Fig.28	22.58	24	0.443	<b>0.61</b>	0.853	<b>1.18</b>	-0.14
41490	2680	50RB_Mid	Front	/	22.68	23	0.151	<b>0.16</b>	0.280	<b>0.30</b>	0.13
41490	2680	50RB_Mid	Rear	/	22.68	23	0.172	<b>0.19</b>	0.319	<b>0.34</b>	0.09
41490	2680	50RB_Mid	Left	/	22.68	23	0.073	<b>0.08</b>	0.158	<b>0.17</b>	0.02
41490	2680	50RB_Mid	Bottom	/	22.68	23	0.289	<b>0.31</b>	0.586	<b>0.63</b>	0.01
41490	2680	100RB	Bottom	/	22.43	23	0.311	<b>0.35</b>	0.629	<b>0.72</b>	0.06

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

Note2: The LTE mode is QPSK\_20MHz.

**Table 14.1-29: SAR Values (LTE band66 - Head)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C						
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
132072	1720	1RB_Low	Left	Touch	Fig.29	23.95	24	0.194	<b>0.20</b>	0.287	<b>0.29</b>	-0.12
132072	1720	1RB_Low	Left	Tilt	/	23.95	24	0.053	<b>0.05</b>	0.078	<b>0.08</b>	0.05
132072	1720	1RB_Low	Right	Touch	/	23.95	24	0.135	<b>0.14</b>	0.203	<b>0.21</b>	0.04
132072	1720	1RB_Low	Right	Tilt	/	23.95	24	0.069	<b>0.07</b>	0.102	<b>0.10</b>	-0.08
132072	1720	50RB_Low	Left	Touch	/	22.98	23	0.152	<b>0.15</b>	0.228	<b>0.23</b>	0.05
132072	1720	50RB_Low	Left	Tilt	/	22.98	23	0.037	<b>0.04</b>	0.049	<b>0.05</b>	0.02
132072	1720	50RB_Low	Right	Touch	/	22.98	23	0.110	<b>0.11</b>	0.165	<b>0.17</b>	0.01
132072	1720	50RB_Low	Right	Tilt	/	22.98	23	0.053	<b>0.05</b>	0.078	<b>0.08</b>	-0.14

Note1: The LTE mode is QPSK\_20MHz.

**Table 14.1-30: SAR Values (LTE band66 - Body)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C					
Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
132572	1770	1RB_Low	Front	Fig.30	22.49	22.5	0.543	<b>0.54</b>	0.921	<b>0.92</b>	-0.14
132322	1745	1RB_High	Front	/	22.29	22.5	0.496	<b>0.52</b>	0.828	<b>0.87</b>	0.05
132072	1720	1RB_Low	Front	/	22.46	22.5	0.534	<b>0.54</b>	0.900	<b>0.91</b>	0.07
132572	1770	1RB_Low	Rear	/	22.49	22.5	0.374	<b>0.37</b>	0.653	<b>0.65</b>	0.03
132572	1770	1RB_Low	Left	/	22.49	22.5	0.034	<b>0.03</b>	0.053	<b>0.05</b>	0.04
132572	1770	1RB_Low	Right	/	22.49	22.5	0.093	<b>0.09</b>	0.198	<b>0.20</b>	-0.02
132572	1770	1RB_Low	Bottom	/	22.49	22.5	0.390	<b>0.39</b>	0.699	<b>0.70</b>	-0.12
132072	1720	50RB_Low	Front	/	21.70	22.5	0.323	<b>0.39</b>	0.580	<b>0.70</b>	-0.04
132072	1720	50RB_Low	Rear	/	21.70	22.5	0.274	<b>0.33</b>	0.513	<b>0.62</b>	-0.01
132072	1720	50RB_Low	Left	/	21.70	22.5	0.032	<b>0.04</b>	0.055	<b>0.07</b>	-0.15
132072	1720	50RB_Low	Right	/	21.70	22.5	0.061	<b>0.07</b>	0.128	<b>0.15</b>	0.06
132072	1720	50RB_Low	Bottom	/	21.70	22.5	0.321	<b>0.39</b>	0.588	<b>0.71</b>	-0.01
132072	1720	100RB	Front	/	21.60	22.5	0.338	<b>0.42</b>	0.603	<b>0.74</b>	0.09

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

Note2: The LTE mode is QPSK\_20MHz.

**Table 14.1-31: SAR Values (LTE band66 - Body)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C					
Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
132072	1720	1RB_Low	Front	Fig.31	23.95	24	0.476	<b>0.48</b>	0.749	<b>0.76</b>	-0.02
132072	1720	1RB_Low	Rear	/	23.95	24	0.374	<b>0.38</b>	0.592	<b>0.60</b>	-0.06
132072	1720	50RB_Low	Front	/	22.98	23	0.390	<b>0.39</b>	0.612	<b>0.61</b>	-0.02
132072	1720	50RB_Low	Rear	/	22.98	23	0.290	<b>0.29</b>	0.458	<b>0.46</b>	0.04

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

Note2: The LTE mode is QPSK\_20MHz.

#### 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./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
128	824.2	Right	Touch	Fig.1	29.95	30.5	0.434	<b>0.49</b>	0.558	<b>0.63</b>	-0.05

Note: the head SAR of GSM850 is tested with GPRS (3Txslots) mode because of VoIP.

**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./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
128	824.2	GPRS (3)	Front	Fig.2	29.95	30.5	0.724	<b>0.82</b>	1.03	<b>1.17</b>	0.04

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

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

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C					
Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
512	1850.2	Left	Touch	Fig.3	27.26	28	0.117	<b>0.14</b>	0.178	<b>0.21</b>	0.01

Note: the head SAR of GSM1900 is tested with GPRS (4Txslots) mode because of VoIP.

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

Frequency		Mode (number of timeslots)	Test Position	Figure No./N ote	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
661	1880	GPRS (4)	Front	Fig.4	27.53	28	0.544	<b>0.61</b>	0.936	<b>1.04</b>	-0.09

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

**Table 14.2-5: SAR Values (WCDMA 850 MHz Band - Head)**

Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
4233	846.6	Right	Touch	Fig.5	23.86	24	0.250	<b>0.26</b>	0.329	<b>0.34</b>	-0.08

**Table 14.2-6: SAR Values (WCDMA 850 MHz Band - Body)**

Frequency		Test Position	Figure No./N ote	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
4233	846.6	Rear	Fig.6	23.86	24	0.529	<b>0.55</b>	0.758	<b>0.78</b>	-0.06

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

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

Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
1537	1712.4	Left	Touch	Fig.7	23.68	24	0.164	<b>0.18</b>	0.237	<b>0.26</b>	0.17

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

Frequency		Test Position	Figure No./N ote	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
1738	1752.6	Front	Fig.8	21.88	22.5	0.562	<b>0.65</b>	0.960	<b>1.11</b>	-0.10

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

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

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C				
Frequency		Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
1537	1712.4	Front	Fig.9	23.68	24	0.468	<b>0.50</b>	0.759	<b>0.82</b>	-0.17

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

**Table 14.2-10: SAR Values (WCDMA 1900 MHz Band - Head)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C					
Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
9938	1907.6	Left	Touch	Fig.10	24.24	24.5	0.095	<b>0.10</b>	0.138	<b>0.15</b>	0.18

**Table 14.2-11: SAR Values (WCDMA 1900 MHz Band - Body)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C				
Frequency		Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
9662	1852.4	Front	Fig.11	24.35	24.5	0.708	<b>0.73</b>	1.22	<b>1.26</b>	-0.08

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

**Table 14.2-12: SAR Values (LTE Band2 - Head)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C						
Frequency		Mode	Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
19100	1900	1RB_Low	Left	Touch	Fig.12	23.76	24	0.108	<b>0.11</b>	0.163	<b>0.17</b>	0.01

Note1: The LTE mode is QPSK\_20MHz.

**Table 14.2-13: SAR Values (LTE Band2 - Body)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C					
Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
19100	1900	1RB_Low	Rear	Fig.13	23.76	24	0.444	<b>0.47</b>	0.761	<b>0.80</b>	0.09

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

Note2: The LTE mode is QPSK\_20MHz.

**Table 14.2-14: SAR Values (LTE Band5 - Head)**

Ambient Temperature: 22.9°C						Liquid Temperature: 22.5°C						
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
20450	829	1RB_High	Right	Touch	Fig.14	23.72	24	0.310	<b>0.33</b>	0.407	<b>0.43</b>	0.18

Note1: The LTE mode is QPSK\_10MHz.

**Table 14.2-15: SAR Values (LTE Band5 -Body)**

Ambient Temperature: 22.9°C						Liquid Temperature: 22.5°C					
Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
20450	829	1RB_High	Rear	Fig.15	23.72	24	0.461	<b>0.49</b>	0.641	<b>0.68</b>	-0.03

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

Note2: The LTE mode is QPSK\_10MHz.

**Table 14.2-16: SAR Values(LTE Band7 - Head)**

Ambient Temperature: 22.9°C						Liquid Temperature: 22.5°C						
Frequency		Mode	Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
20850	2510	1RB_Low	Right	Touch	Fig.16	23.26	24.5	0.183	<b>0.24</b>	0.347	<b>0.46</b>	0.07

Note1: The LTE mode is QPSK\_20MHz.

**Table 14.2-17: SAR Values (LTE Band7 - Body)**

Ambient Temperature: 22.9°C						Liquid Temperature: 22.5°C					
Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
20850	2510	100RB	Bottom	/	20.28	20.5	0.538	<b>0.57</b>	1.04	<b>1.09</b>	0.01

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

Note2: The LTE mode is QPSK\_20MHz.

**Table 14.2-18: SAR Values (LTE Band7 - Body)**

Ambient Temperature: 22.9°C						Liquid Temperature: 22.5°C					
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Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
20850	2510	1RB_Low	Front	Fig.18	23.26	24.5	0.278	<b>0.37</b>	0.488	<b>0.65</b>	-0.02

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

Note2: The LTE mode is QPSK\_20MHz.

**Table 14.2-19: SAR Values(LTE Band12 - Head)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C						
Frequency		Mode	Side	Test Position	Figure No./Note	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
23130	711	1RB_High	Right	Touch	Fig.19	23.84	24	0.119	<b>0.12</b>	0.147	<b>0.15</b>	0.03

Note1: The LTE mode is QPSK\_10MHz.

**Table 14.2-20: SAR Values (LTE Band12 - Body)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C					
Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
23130	711	1RB_High	Rear	Fig.20	23.84	24	0.200	<b>0.21</b>	0.281	<b>0.29</b>	0.02

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

Note2: The LTE mode is QPSK\_10MHz.

**Table 14.2-21: SAR Values(LTE Band13 - Head)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C						
Frequency		Mode	Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
23230	782	1RB_Low	Right	Touch	Fig.21	23.54	24	0.229	<b>0.25</b>	0.293	<b>0.33</b>	0.02

Note1: The LTE mode is QPSK\_10MHz.

**Table 14.2-22: SAR Values (LTE Band13 - Body)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C					
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Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
23230	782	1RB_Low	Rear	Fig.22	23.54	24	0.284	<b>0.32</b>	0.446	<b>0.50</b>	0.05

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

Note2: The LTE mode is QPSK\_10MHz.

**Table 14.2-23: SAR Values(LTE Band30 - Head)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C						
Frequency		Mode	Side	Test Position	Figure No./Note	Conduct ed 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)	Powe r Drift (dB)
Ch.	MHz											
27710	2310	1RB_High	Right	Touch	Fig.23	24.21	24.5	0.093	<b>0.10</b>	0.165	<b>0.18</b>	0.08

Note1: The LTE mode is QPSK\_10MHz.

**Table 14.2-24: SAR Values (LTE Band30 - Body)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C					
Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
27710	2310	1RB_High	Bottom	Fig.24	24.21	24.5	0.446	<b>0.48</b>	0.796	<b>0.85</b>	0.05

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

Note2: The LTE mode is QPSK\_10MHz.

**Table 14.2-25: SAR Values(LTE Band38 - Head)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C						
Frequency		Mode	Side	Test Position	Figure No./Note	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)	Powe r Drift (dB)
Ch.	MHz											
38150	2610	1RB_Mid	Right	Touch	Fig.25	23.82	24	0.044	<b>0.05</b>	0.083	<b>0.09</b>	0.06

Note1: The LTE mode is QPSK\_20MHz.

**Table 14.2-26: SAR Values (LTE Band38 - Body)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C					
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Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
38150	2610	1RB_Mid	Bottom	Fig.26	23.82	24	0.345	<b>0.36</b>	0.672	<b>0.70</b>	-0.03

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

Note2: The LTE mode is QPSK\_20MHz.

**Table 14.2-27: SAR Values(LTE Band41 - Head)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C						
Frequency		Mode	Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
41490	2680	1RB_High	Right	Touch	Fig.27	23.79	24	0.041	<b>0.04</b>	0.080	<b>0.08</b>	0.04

Note1: The LTE mode is QPSK\_20MHz.

**Table 14.2-28: SAR Values (LTE Band41 - Body)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C					
Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
39750	2506	1RB_High	Bottom	Fig.28	22.58	24	0.443	<b>0.61</b>	0.853	<b>1.18</b>	-0.14

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

Note2: The LTE mode is QPSK\_20MHz.

**Table 14.2-29: SAR Values (LTE band66 - Head)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C						
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
132072	1720	1RB_Low	Left	Touch	Fig.29	23.95	24	0.194	<b>0.20</b>	0.287	<b>0.29</b>	-0.12

Note1: The LTE mode is QPSK\_20MHz.

**Table 14.2-30: SAR Values (LTE band66 - Body)**

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C					
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Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
132572	1770	1RB_Low	Front	Fig.30	22.49	22.5	0.543	<b>0.54</b>	0.921	<b>0.92</b>	-0.14

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

Note2: The LTE mode is QPSK\_20MHz.

**Table 14.2-31: SAR Values (LTE band66 - Body)**

Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C					
132072	1720	1RB_Low	Front	Fig.31	23.95	24	0.476	<b>0.48</b>	0.749	<b>0.76</b>	-0.02

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

Note2: The LTE mode is QPSK\_20MHz.

### 14.3WLAN Evaluation for 2.4G

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

test position procedure.

**Head Evaluation**

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

Frequency		Side	Test Position	Figure No./ Note	Ambient Temperature: 22.9 °C		Liquid Temperature: 22.5 °C				Power Drift (dB)
MHz	Ch.				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)	
2437	6	Left	Touch	/	14.23	14.5	0.397	<b>0.42</b>	0.869	<b>0.92</b>	-0.19
2437	6	Left	Tilt	/	14.23	14.5	0.431	<b>0.46</b>	0.932	<b>0.99</b>	0.06
2437	6	Right	Touch	/	14.23	14.5	0.229	<b>0.24</b>	0.484	<b>0.52</b>	-0.19
2437	6	Right	Tilt	/	14.23	14.5	0.245	<b>0.26</b>	0.530	<b>0.56</b>	-0.07

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

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

Frequency		Side	Test Position	Figure No./ Note	Ambient Temperature: 22.9 °C		Liquid Temperature: 22.5 °C				Power Drift (dB)
MHz	Ch.				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)	
2437	6	Left	Tilt	Fig.32	14.23	14.5	0.435	<b>0.46</b>	1.06	<b>1.13</b>	0.06
2437	6	Left	Touch	/	14.23	14.5	0.400	<b>0.43</b>	0.957	<b>1.02</b>	-0.19
2437	6	Right	Tilt	/	14.23	14.5	0.256	<b>0.27</b>	0.582	<b>0.62</b>	-0.07
2462	11	Left	Tilt	/	13.88	14.5	0.307	<b>0.35</b>	0.779	<b>0.90</b>	0.07
2462	11	Left	Touch	/	13.88	14.5	0.270	<b>0.31</b>	0.677	<b>0.78</b>	0.07

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

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

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

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

Frequency		Side	Test Position	Ambient Temperature: 22.9 °C		Liquid Temperature: 22.5 °C	
MHz	Ch.			Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
2437	6	Left	Tilt	97.63%	100%	<b>1.13</b>	<b>1.16</b>
2437	6	Left	Touch	97.63%	100%	<b>1.02</b>	<b>1.04</b>

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

**Body Evaluation**

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

Frequency		Test Position	Figure No./ Note	Ambient Temperature: 22.9 °C		Liquid Temperature: 22.5 °C				Power Drift (dB)
MHz	Ch.			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)	
2437	6	Front	/	18.50	19	0.144	<b>0.16</b>	0.268	<b>0.30</b>	0.09
2437	6	Rear	/	18.50	19	0.130	<b>0.15</b>	0.256	<b>0.29</b>	0.19
2437	6	Right	/	18.50	19	0.053	<b>0.06</b>	0.109	<b>0.12</b>	-0.11
2437	6	Top	/	18.50	19	0.204	<b>0.23</b>	0.435	<b>0.49</b>	-0.03

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

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

Frequency		Test Position	Figure No./ Note	Ambient Temperature: 22.9 °C		Liquid Temperature: 22.5 °C				Power Drift (dB)
MHz	Ch.			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)	
2437	6	Top	Fig.33	18.50	19	0.228	<b>0.26</b>	0.463	<b>0.52</b>	-0.03

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

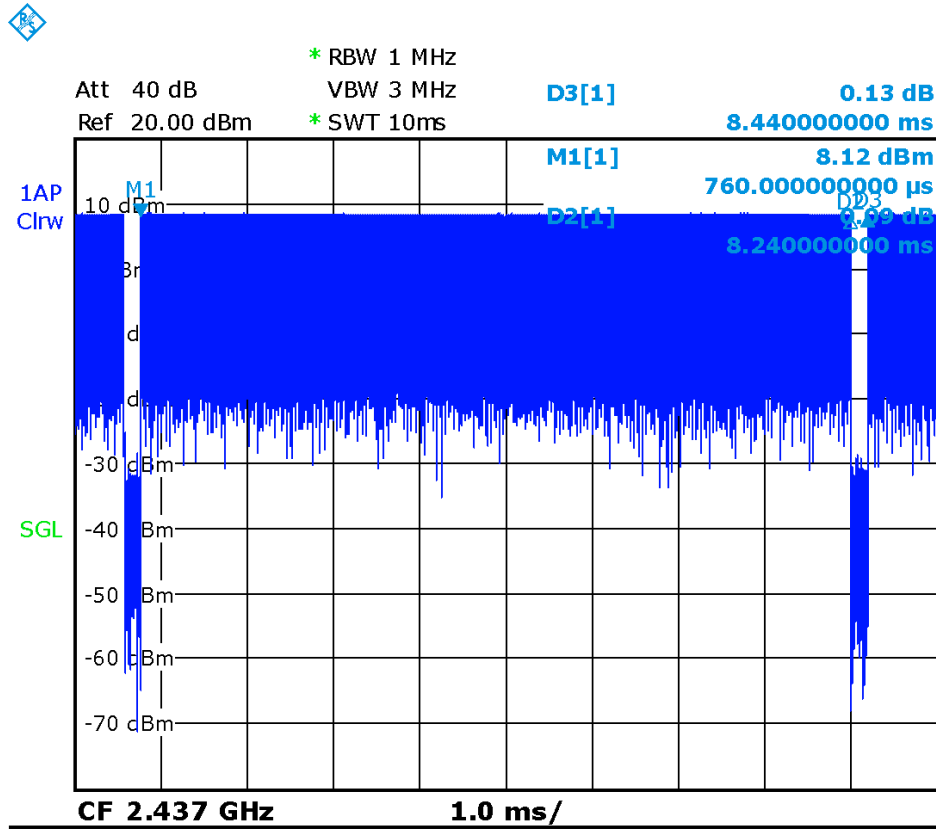
Note2: For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the reported SAR is ≤ 1.2 W/kg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

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

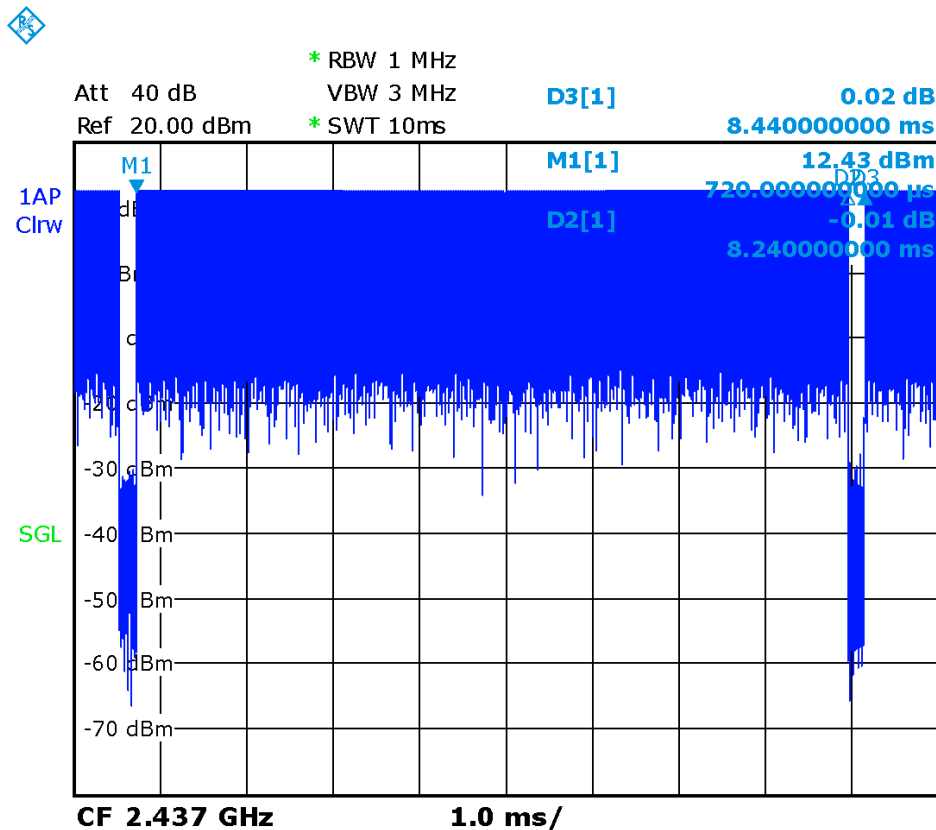
**Table 14.3-6: SAR Values (WLAN - Body) – 802.11b (Scaled Reported SAR)**

Frequency		Test Position	Ambient Temperature: 22.9 °C		Liquid Temperature: 22.5 °C	
MHz	Ch.		Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
2437	6	Front	97.63%	100%	<b>0.30</b>	<b>0.31</b>
2437	6	Top	97.63%	100%	<b>0.52</b>	<b>0.53</b>

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



Picture 14.1 Duty factor plot for head



Picture 14.2 Duty factor plot for body

### 14.4 WLAN Evaluation For 5G

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

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

X: maximum(conducted) output power(mW), including tolerance, specified for production units

**Table 14.4-2: Maximum output power specified of WLAN antenna**

802.11 mode	a	g	n		ac			
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	25		20	13	16	10	7	
U-NII-2A	25		20	13	16	10	7	
U-NII-2C	16		13	10	11	8	4	
U-NII-3	20		16	18	13	14	7	
§ 15.247 (5.8 GHz)								

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

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

802.11 mode	a	n		ac		
BW(MHz)	20	20	40	20	40	80
U-NII-1	36/40/44/48 18/19/21/22	36/40/44/48 Lower power	38/46 Lower power	36/40/44/48 Lower power	38/46 Lower power	42 Lower power
U-NII-2A	52/56/60/64 23/19/20/19	52/56/60/64 Lower power	54/62 Lower power	52/56/60/64 Lower power	54/62 Lower power	58 Lower power
U-NII-2C	100/104/108/112 13/13/14/15 116/120/124/128 15/15/14/12 132/136/140/144 11/10/11/13	100/104/108/112 116/132/136/140 Lower power	102/110/134 Lower power	100/104/108 /112 116/132/136/ 140 Lower power	102/110/134 Lower power	106 Lower power
U-NII-3	149/153/157/161/165 16/18/16/14/13	149/153/157/16 1/165 Lower power	151/159 Lower power	149/153/157 /161/165 Lower power	151/159 Lower power	155 Lower power

- Channels with measured maximum power within 0.25dB are considered to have the same measured output. Channels selected for initial test configuration are **highlighted in yellow**.



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

802.11 mode	a	n		ac		
BW(MHz)	20	20	40	20	40	80
U-NII-1	36/40/44/48 U-NII-2A exclusion applied	36/40/44/48	38/46	36/40/44/48	38/46	42
U-NII-2A	52/56/60/64 0.95 / 0.94	52/56/60/64	54/62	52/56/60/64	54/62	58
U-NII-2C	100/104/108/112/116/120/124/128/132/136/140/144 0.92 / 0.95	100/104/108/112/116/132/136/140	102/110/118/126/134	100/104/108/112/116/132/136/140	102/110/134	106
U-NII-3	149/153/157/161/165 0.73	149/153/157/161/165	151/159	149/153/157/161/165	151/159	155

U-NII-1 and U-NII-2A bands have the same specified maximum output and tolerance; SAR is measured for U-NII-2A band first. Adjusted SAR of U-NII-2A band is  $\leq 1.2$ W/kg, SAR is not required for U-NII-1 band. Initial test configuration SAR for U-NII-2A band is  $> 0.8$  W/kg, SAR is required for next highest output channel in initial test configuration. The next highest output channel SAR is  $\leq 1.2$  W/kg, SAR is not required for subsequent next highest output channel. Similar circumstances apply to U-NII-2C band and U-NII-3 band. The green highlighted channels are next highest measured output channel in the initial test configuration. Highest measured output power channel tested initially are in yellow highlight.

**Table 14.4-5: Reported SAR of initial test configuration for Body**

802.11 mode	a	n		ac		
BW(MHz)	20	20	40	20	40	80
U-NII-1	36/40/44/48 U-NII-2A exclusion applied	36/40/44/48	38/46	36/40/44/48	38/46	42
U-NII-2A	52/56/60/64 0.05	52/56/60/64	54/62	52/56/60/64	54/62	58
U-NII-2C	100/104/108/112/116/120/124/128/132/136/140/144 0.16	100/104/108/112/116/132/136/140	102/110/118/126/134	100/104/108/112/116/132/136/140	102/110/134	106
U-NII-3	149/153/157/161/165 0.16	149/153/157/161/165	151/159	149/153/157/161/165	151/159	155

U-NII-1 and U-NII-2A bands have the same specified maximum output and tolerance; SAR is measured for U-NII-2A band first. Adjusted SAR of U-NII-2A band is  $\leq 1.2$ W/kg, SAR is not required for U-NII-1 band. Highest measured output power channel tested initially are in yellow highlight.

**Table 14.4-6: SAR Values(WLAN - Head)– 802.11a 6Mbps**

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-upPower (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.										
5260	52	Left	Touch	/	13.64	14	0.169	<b>0.18</b>	0.646	<b>0.70</b>	0.08
5260	52	Left	Tilt	/	13.64	14	0.176	<b>0.19</b>	0.661	<b>0.72</b>	-0.02
5260	52	Right	Touch	/	13.64	14	0.186	<b>0.20</b>	0.710	<b>0.77</b>	-0.09
5260	52	Right	Tilt	/	13.64	14	0.231	<b>0.25</b>	0.767	<b>0.83</b>	-0.17
5300	60	Right	Tilt	/	13.01	14	0.192	<b>0.24</b>	0.655	<b>0.82</b>	-0.02
5600	120	Left	Touch	/	11.81	12	0.216	<b>0.23</b>	0.765	<b>0.80</b>	0.05
5600	120	Left	Tilt	/	11.81	12	0.197	<b>0.21</b>	0.670	<b>0.70</b>	-0.01
5600	120	Right	Touch	/	11.81	12	0.204	<b>0.21</b>	0.701	<b>0.73</b>	0.02
5600	120	Right	Tilt	Fig.34	11.81	12	0.225	<b>0.24</b>	0.796	<b>0.83</b>	-0.16
5580	116	Right	Tilt	/	11.87	12	0.182	<b>0.19</b>	0.781	<b>0.80</b>	-0.06
5765	153	Left	Touch	/	12.45	13	0.134	<b>0.15</b>	0.436	<b>0.49</b>	0.15
5765	153	Left	Tilt	/	12.45	13	0.138	<b>0.16</b>	0.407	<b>0.46</b>	-0.05
5765	153	Right	Touch	/	12.45	13	0.132	<b>0.15</b>	0.439	<b>0.50</b>	0.02
5765	153	Right	Tilt	/	12.45	13	0.153	<b>0.17</b>	0.561	<b>0.64</b>	-0.07

**Table 14.4-7: SAR Values (WLAN - Body)– 802.11a6Mbps**

Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-upPower (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.									
5260	52	Front	/	13.64	14	0.008	<b>0.01</b>	0.024	<b>0.03</b>	0.01
5260	52	Rear	/	13.64	14	0.020	<b>0.02</b>	0.038	<b>0.04</b>	0.01
5260	52	Right	/	13.64	14	< 0.01	<b>&lt; 0.01</b>	< 0.01	<b>&lt; 0.01</b>	-0.08
5260	52	Top	/	13.64	14	0.016	<b>0.02</b>	0.018	<b>0.02</b>	-0.01
5600	120	Front	/	11.81	12	0.024	<b>0.03</b>	0.081	<b>0.09</b>	0.09
5600	120	Rear	/	11.81	12	0.039	<b>0.04</b>	0.116	<b>0.12</b>	-0.05
5600	120	Right	/	11.81	12	0.016	<b>0.02</b>	0.045	<b>0.05</b>	0.05
5600	120	Top	Fig.35	11.81	12	0.045	<b>0.05</b>	0.132	<b>0.14</b>	0.09
5765	153	Front	/	12.45	13	0.024	<b>0.03</b>	0.081	<b>0.09</b>	0.05
5765	153	Rear	/	12.45	13	0.033	<b>0.04</b>	0.098	<b>0.11</b>	0.05
5765	153	Right	/	12.45	13	0.009	<b>0.01</b>	0.029	<b>0.03</b>	-0.01
5765	153	Top	/	12.45	13	0.041	<b>0.05</b>	0.124	<b>0.14</b>	0.06

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

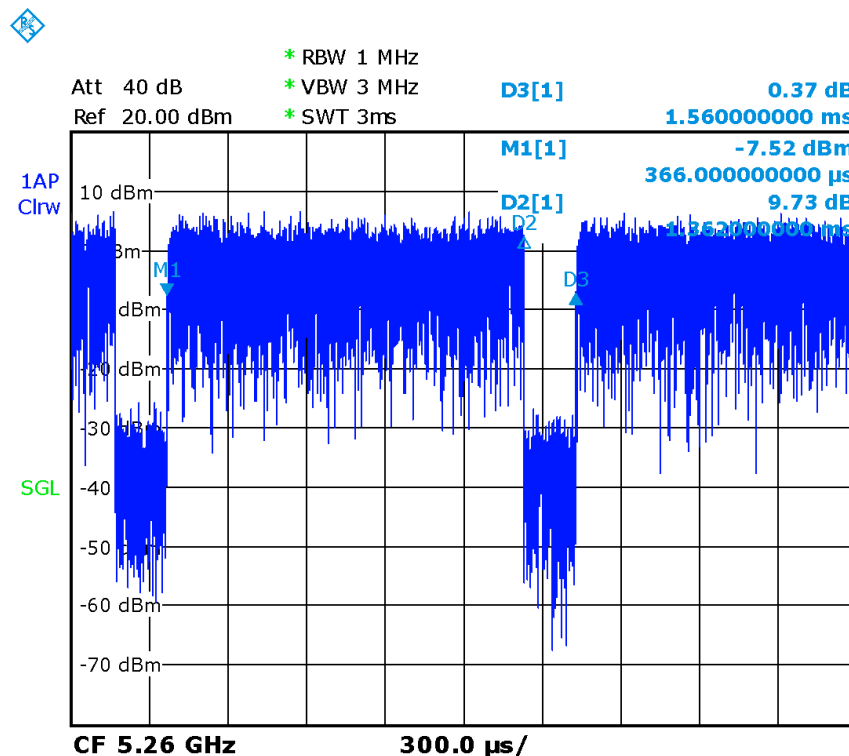
According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit. The scaled reported SAR is presented as below.

**Table 14.4-8: SAR Values (WLAN - Head) – 802.11a 6Mbps (Scaled Reported SAR)**

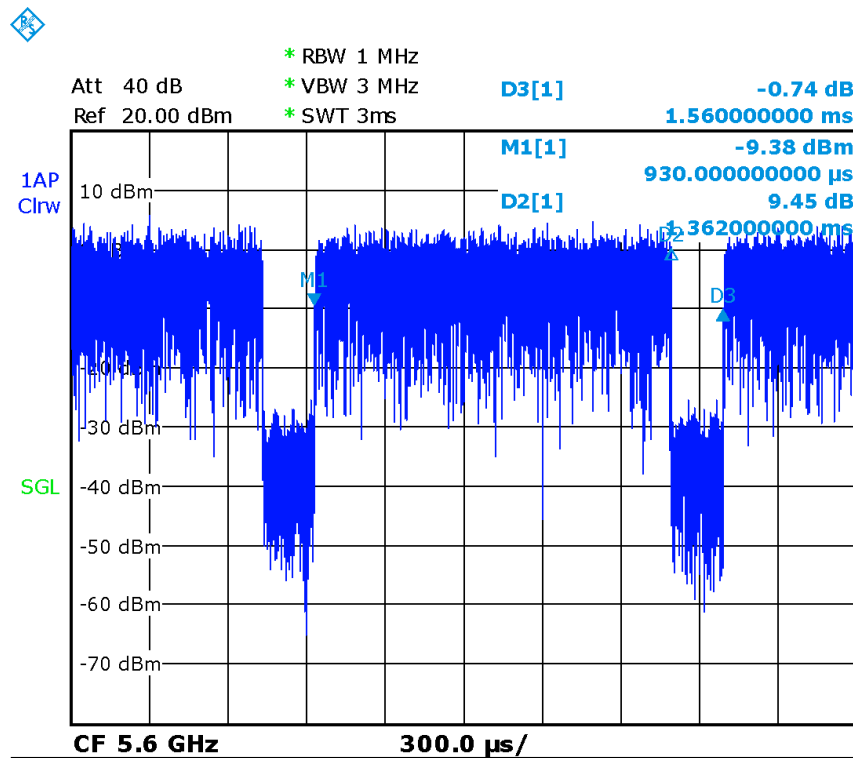
Frequency		Side	Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
MHz	Ch.						
5260	52	Right	Tilt	87.31%	100%	<b>0.83</b>	<b>0.95</b>
5300	60	Right	Tilt	87.31%	100%	<b>0.82</b>	<b>0.94</b>
5600	120	Right	Tilt	87.31%	100%	<b>0.83</b>	<b>0.95</b>
5580	116	Right	Tilt	87.31%	100%	<b>0.80</b>	<b>0.92</b>
5765	153	Right	Tilt	87.31%	100%	<b>0.64</b>	<b>0.73</b>
5260	52	Right	Touch	87.31%	100%	<b>0.77</b>	<b>0.88</b>

**Table 14.4-9: SAR Values (WLAN - Body) – 802.11a 6Mbps (Scaled Reported SAR)**

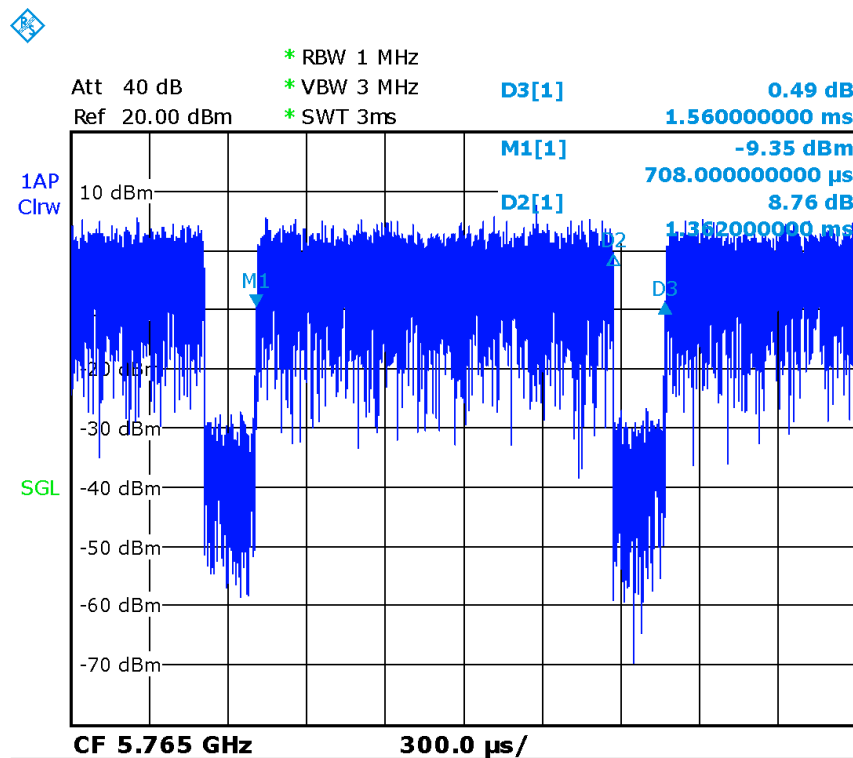
Frequency		Test Position	D (mm)	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
MHz	Ch.						
5260	52	Rear	10	87.31%	100%	<b>0.04</b>	<b>0.05</b>
5600	120	Top	10	87.31%	100%	<b>0.14</b>	<b>0.16</b>
5765	153	Top	10	87.31%	100%	<b>0.14</b>	<b>0.16</b>



**Picture 14.3 The plot of duty factor for U-NII-2A**



Picture 14.4 The plot of duty factor for U-NII-2C



Picture 14.5 The plot of duty factor for U-NII-3

## 15SAR Measurement Variability

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

The following procedures are applied to determine if repeatedmeasurements are required.

- 1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps2) through 4) do not apply.
- 2) When the original highest measured SAR is  $\geq 0.80$  W/kg, repeat that measurement once.
- 3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the originaland 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 repeatedmeasurements 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)
Ch.	MHz						
128	824.2	Front	10	1.03	1.02	1.01	/

**Table 15.2: SAR Measurement Variability for Body PCS1900 (1g)**

Frequency		Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz						
661	1880	Front	10	0.936	0.927	1.01	/

**Table 15.3: SAR Measurement Variability for Body W1700 (1g)**

Frequency		Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz						
1738	1752.6	Front	10	0.960	0.953	1.01	/

**Table 15.4: SAR Measurement Variability for Body W1900 (1g)**

Frequency		Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz						
8662	1852.4	Front	10	1.22	1.20	1.02	/

**Table 15.5: SAR Measurement Variability for Body LTE B7 (1g)**

Frequency		Mode	Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz							
20850	2510	100RB	Bottom	10	1.04	1.03	1.01	/

**Table 15.6: SAR Measurement Variability for Body LTE B41 (1g)**

Frequency		Mode	Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz							
39750	2506	1RB_High	Bottom	10	0.853	0.845	1.01	/

**Table 15.7: SAR Measurement Variability for Body LTE B66 (1g)**

Frequency		Mode	Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz							
132572	1770	1RB_Low	Front	10	0.921	0.915	1.01	/

## 16 Measurement Uncertainty

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

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
<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
<b>Measurement system</b>										
1	Probe calibration	B	6.55	N	1	1	1	6.55	6.55	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	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	∞
<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	∞
<b>Phantom and set-up</b>										
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	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞



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

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

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
<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	RFambient 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	$\infty$
<b>Phantom and set-up</b>										
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 freedom
<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	RFambient 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	$\infty$
<b>Test sample related</b>										
15	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
16	Device holder	A	3.4	N	1	1	1	3.4	3.4	5

	uncertainty									
17	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	$\infty$
<b>Phantom and set-up</b>										
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 13, 2017	One year
02	Power meter	NRVD	102083	September 22, 2016	One year
03	Power sensor	NRV-Z5	100595		
04	Signal Generator	E4438C	MY49071430	January13,2017	One Year
05	Amplifier	60S1G4	0331848	No Calibration Requested	
06	BTS	E5515C	MY50263375	January 16, 2017	One year
07	BTS	CMW500	159890	November 25, 2016	One year
08	E-field Probe	SPEAG EX3DV4	3846	January13, 2017	One year
09	DAE	SPEAG DAE4	1331	January19, 2017	One year
10	Dipole Validation Kit	SPEAG D750V3	1017	July 19,2017	One year
11	Dipole Validation Kit	SPEAG D835V2	4d069	July 19,2017	One year
12	Dipole Validation Kit	SPEAG D1750V2	1003	July 21,2017	One year
13	Dipole Validation Kit	SPEAG D1900V2	5d101	July 26,2017	One year
14	Dipole Validation Kit	SPEAG D2300V2	1018	July 21,2017	One year
15	Dipole Validation Kit	SPEAG D2450V2	853	July 21,2017	One year
16	Dipole Validation Kit	SPEAG D2600V2	1012	July 21,2017	One year
17	Dipole Validation Kit	SPEAG D5GHzV2	1060	July 25,2017	One year

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

## ANNEX A Graph Results

### 850 Right Cheek Low

Date: 2017-8-8

Electronics: DAE4 Sn1331

Medium: Head 850 MHz

Medium parameters used:  $f = 825$  MHz;  $\sigma = 0.889$  mho/m;  $\epsilon_r = 42.02$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: GSM 850 GPRS Frequency: 824.2 MHz Duty Cycle: 1:2.67

Probe: EX3DV4 –SN3846ConvF(9.33, 9.33, 9.33)

**Area Scan (81x131x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.618 W/kg

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

Reference Value = 5.729 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.727 W/kg

**SAR(1 g) = 0.558 W/kg; SAR(10 g) = 0.434 W/kg**

Maximum value of SAR (measured) = 0.604 W/kg

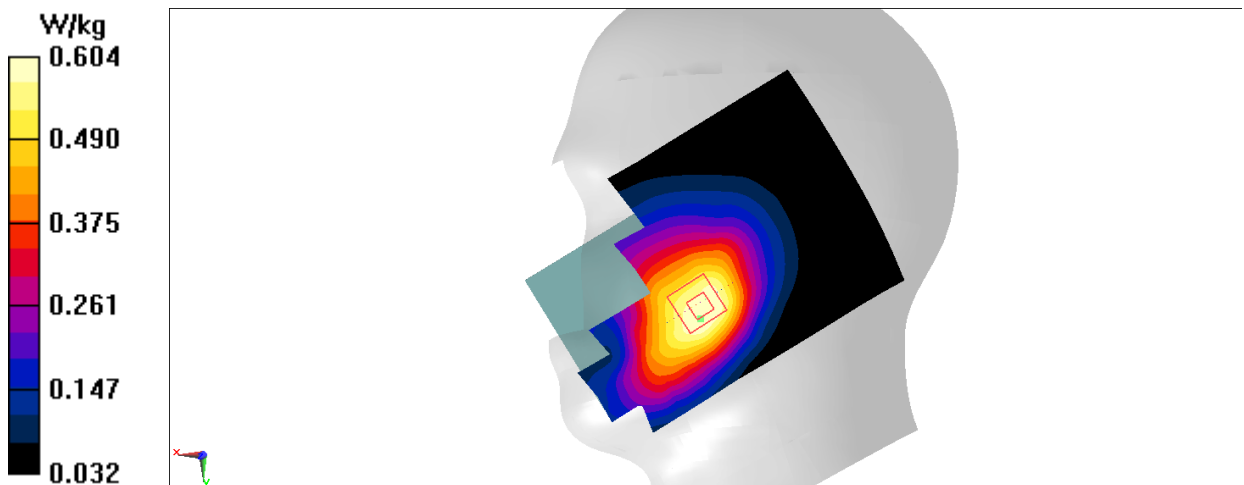


Fig.1 850MHz

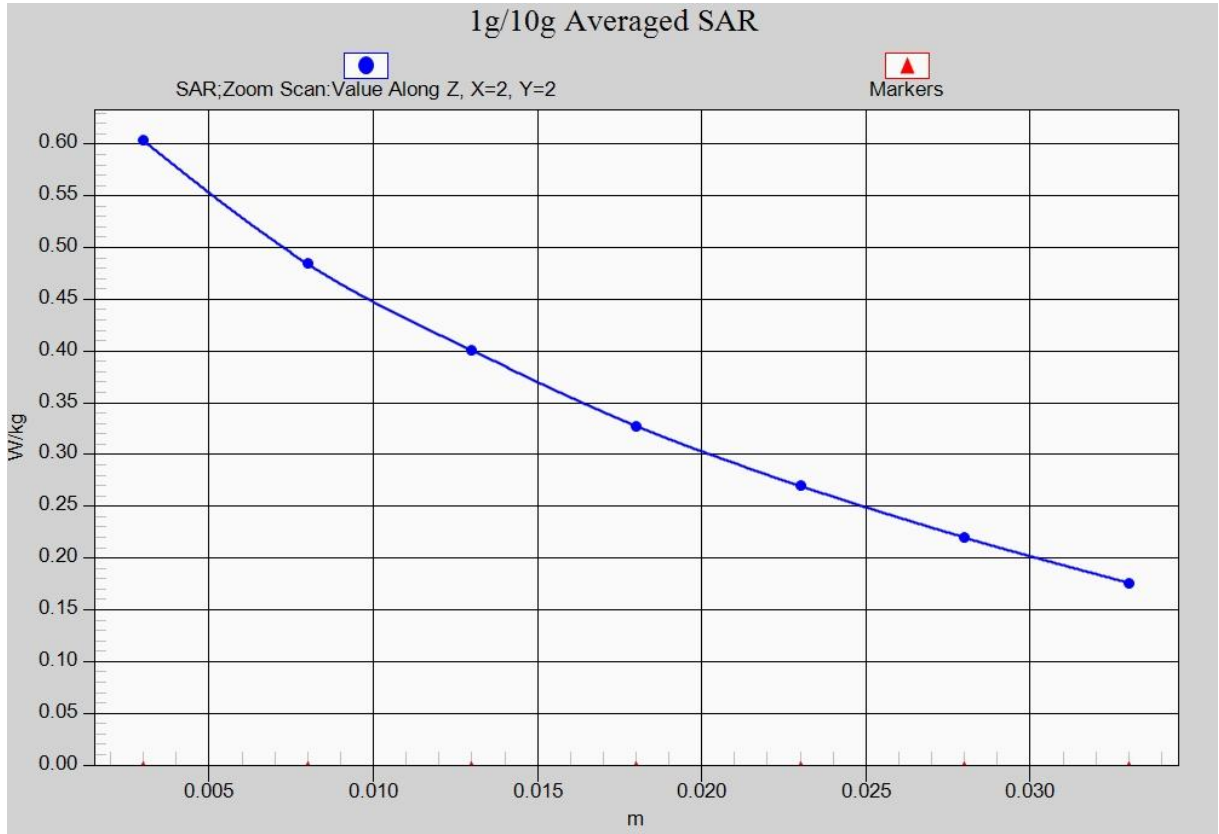


Fig. 1-1 Z-Scan at power reference point (850 MHz)

### 850Body FrontLow

Date: 2017-8-8

Electronics: DAE4 Sn1331

Medium: Body 850 MHz

Medium parameters used:  $f = 825$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 56.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: GSM 850 GPRS Frequency: 824.2 MHz Duty Cycle: 1:2.67

Probe: EX3DV4 –SN3846ConvF(9.52, 9.52, 9.52)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.21 W/kg

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

Reference Value = 22.42 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.39 W/kg

**SAR(1 g) = 1.03 W/kg; SAR(10 g) = 0.724 W/kg**

Maximum value of SAR (measured) = 1.08 W/kg

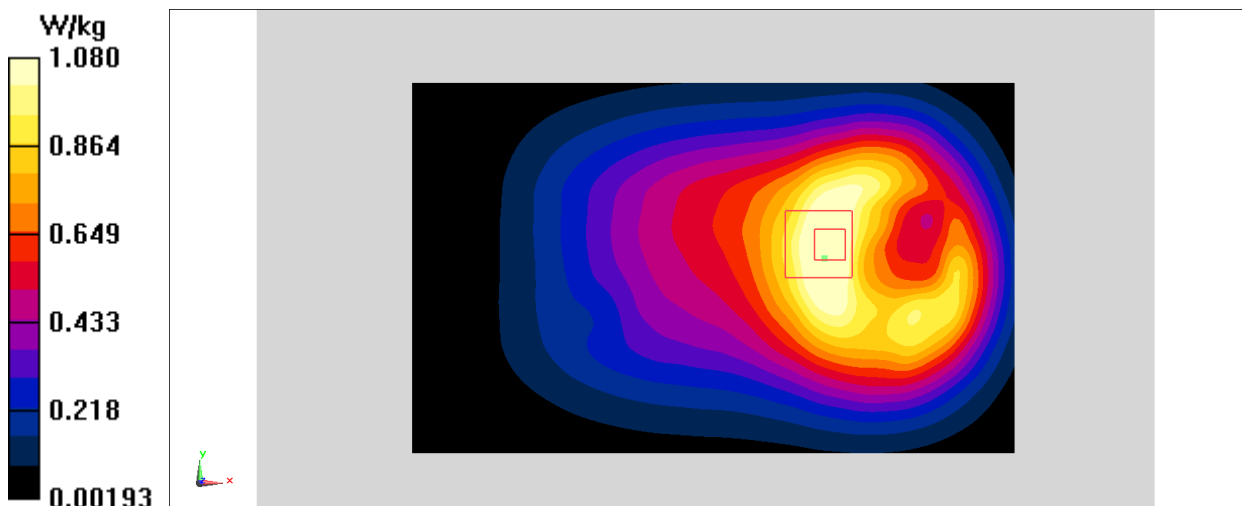


Fig.2 850 MHz

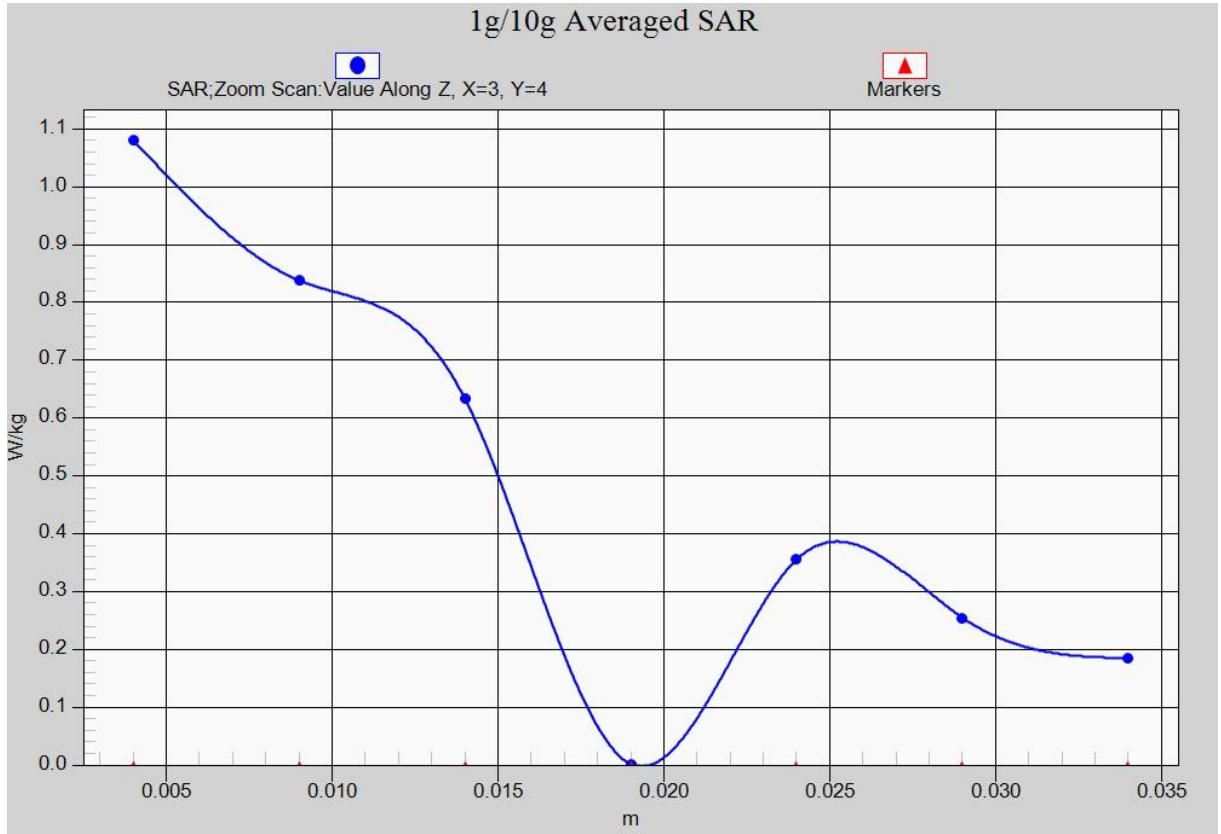


Fig. 2-1Z-Scan at power reference point (850 MHz)

### 1900 LeftCheek Low

Date: 2017-8-9

Electronics: DAE4 Sn1331

Medium: Head 1900 MHz

Medium parameters used (interpolated):  $f = 1850.2$  MHz;  $\sigma = 1.399$  mho/m;  $\epsilon_r = 40.66$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: GSM 1900MHzFrequency: 1850.2 MHz Duty Cycle: 1:2

Probe: EX3DV4-SN3846 ConvF(7.89, 7.89, 7.89)

**Area Scan (71x121x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.373 W/kg

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

Reference Value = 5.867 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.251 W/kg

**SAR(1 g) = 0.178 W/kg; SAR(10 g) = 0.117 W/kg**

Maximum value of SAR (measured) = 0.200 W/kg

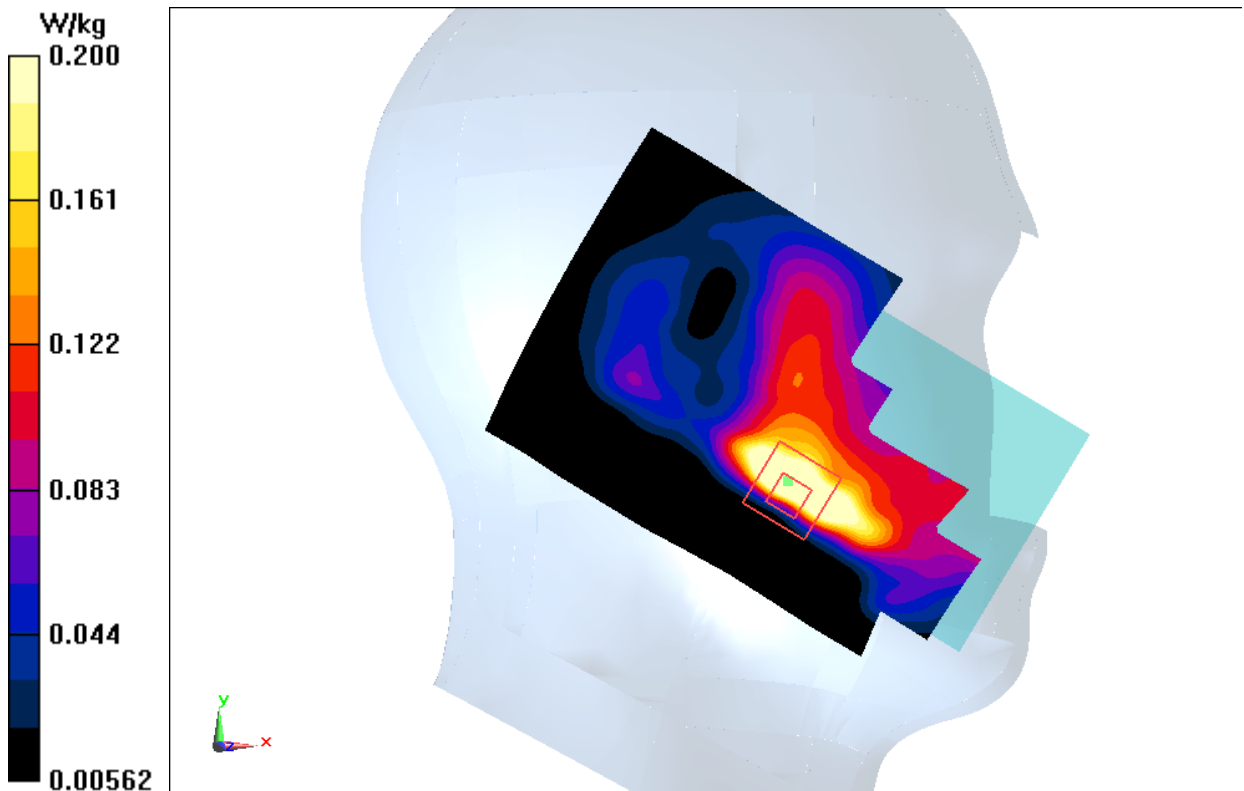


Fig.3 1900 MHz



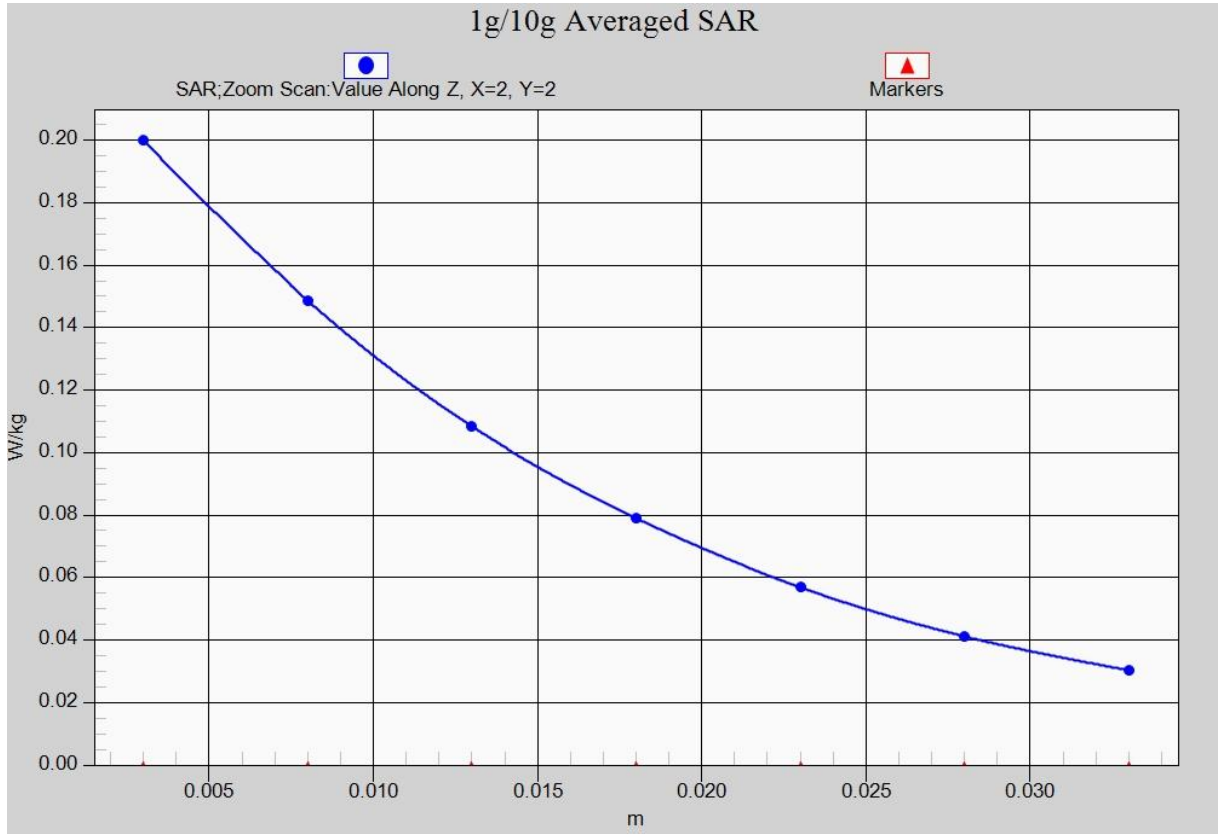


Fig. 3-1Z-Scan at power reference point (1900 MHz)

### 1900 Body FrontMiddle

Date: 2017-8-9

Electronics: DAE4 Sn1331

Medium: Body 1900 MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.545$  mho/m;  $\epsilon_r = 52.73$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: GSM 1900MHz GPRS Frequency: 1880 MHz Duty Cycle: 1:2

Probe: EX3DV4-SN3846 ConvF(7.57, 7.57, 7.57)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.22 W/kg

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

Reference Value = 12.75 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 1.53 W/kg

**SAR(1 g) = 0.936 W/kg; SAR(10 g) = 0.544 W/kg**

Maximum value of SAR (measured) = 1.02 W/kg

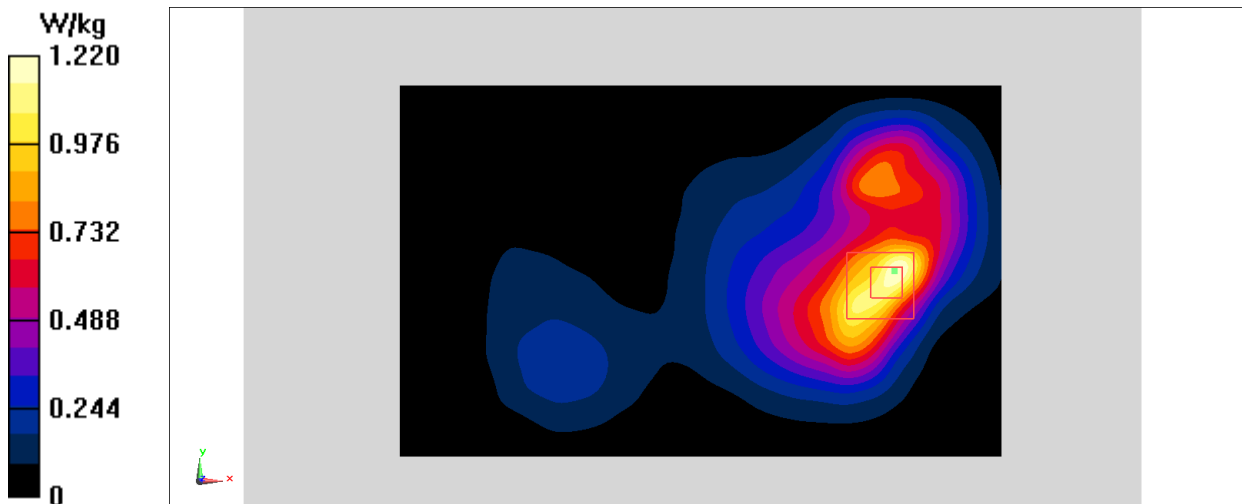


Fig.4 1900 MHz

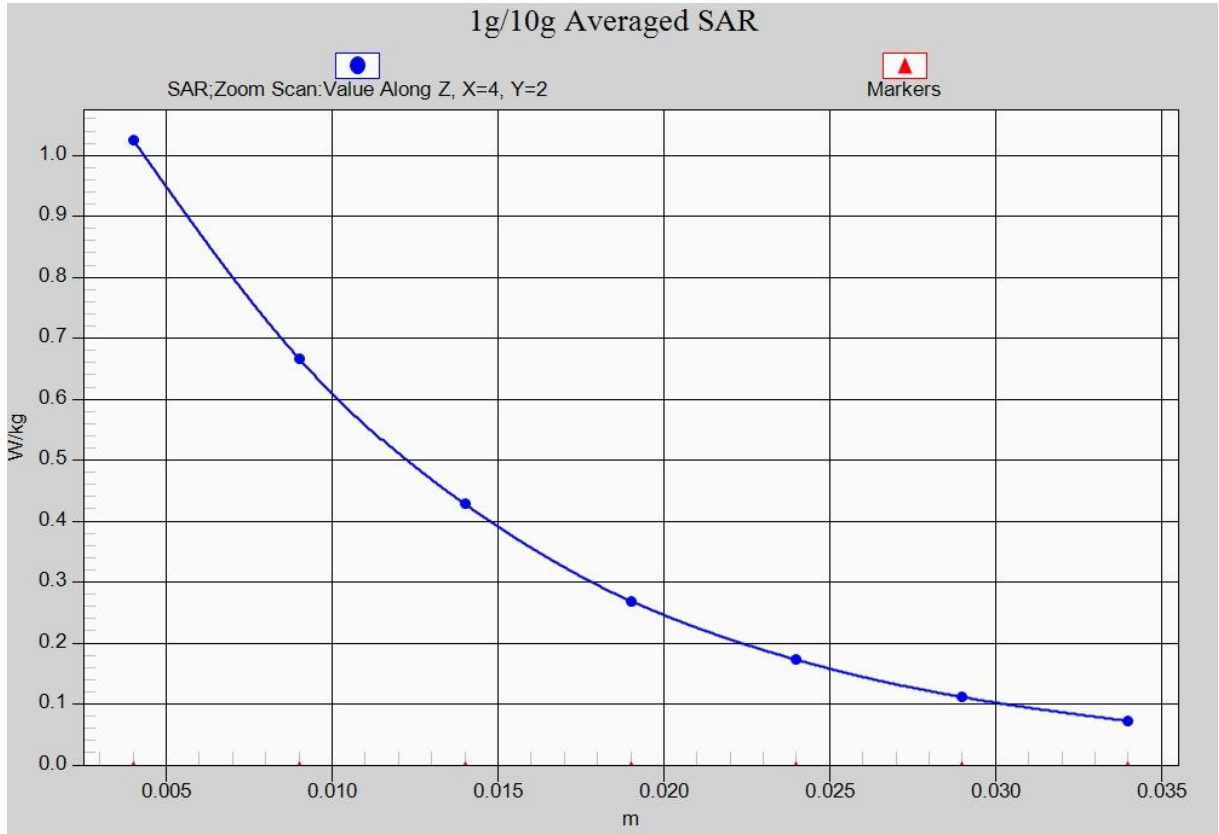


Fig. 4-1Z-Scan at power reference point (1900 MHz)

### WCDMA 850 Right Cheek High

Date: 2017-8-8

Electronics: DAE4 Sn1331

Medium: Head 850 MHz

Medium parameters used (interpolated):  $f = 846.6$  MHz;  $\sigma = 0.909$  mho/m;  $\epsilon_r = 41.725$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Probe: EX3DV4 –SN3846ConvF(9.33, 9.33, 9.33)

**Area Scan (81x131x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.378 W/kg

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

Reference Value = 6.155 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.430 W/kg

**SAR(1 g) = 0.329 W/kg; SAR(10 g) = 0.250 W/kg**

Maximum value of SAR (measured) = 0.362 W/kg

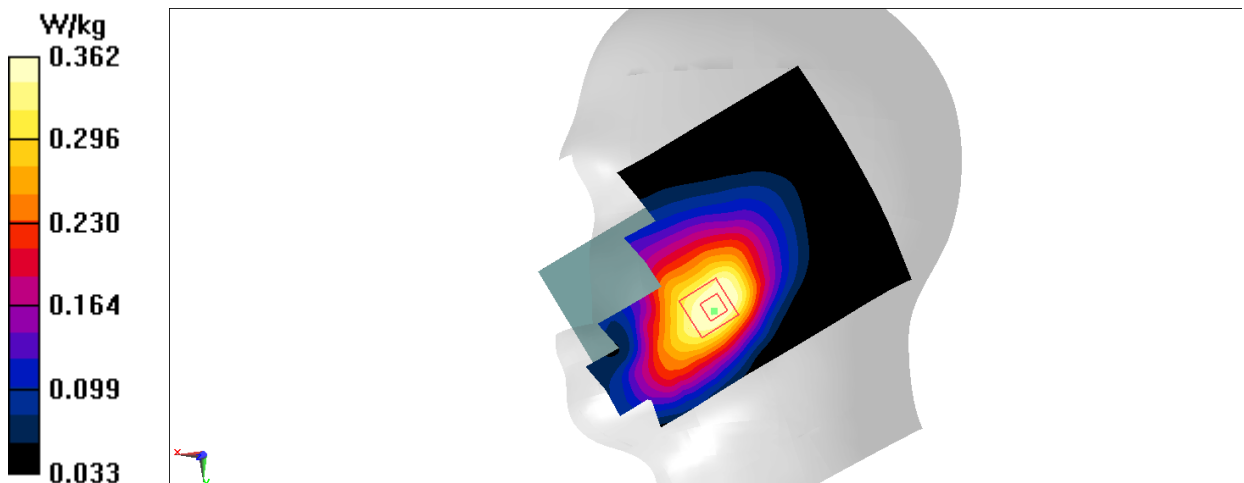


Fig.5 WCDMA 850

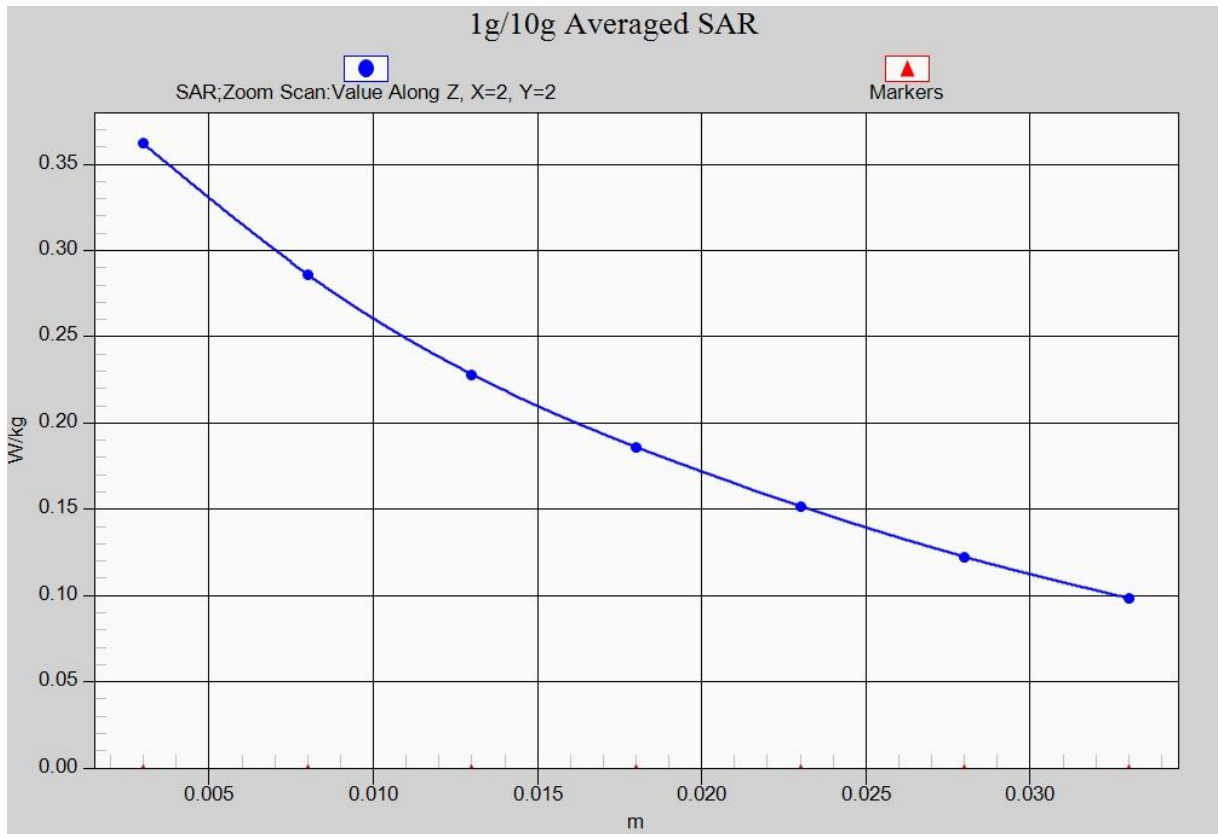


Fig. 5-1Z-Scan at power reference point (850 MHz)

### WCDMA 850Body RearHigh

Date: 2017-8-8

Electronics: DAE4 Sn1331

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 846.6$  MHz;  $\sigma = 0.981$  mho/m;  $\epsilon_r = 55.876$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Probe: EX3DV4 -SN3846ConvF(9.52, 9.52, 9.52)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.903 W/kg

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

Reference Value = 18.82 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.05 W/kg

**SAR(1 g) = 0.758 W/kg; SAR(10 g) = 0.529 W/kg**

Maximum value of SAR (measured) = 0.811 W/kg

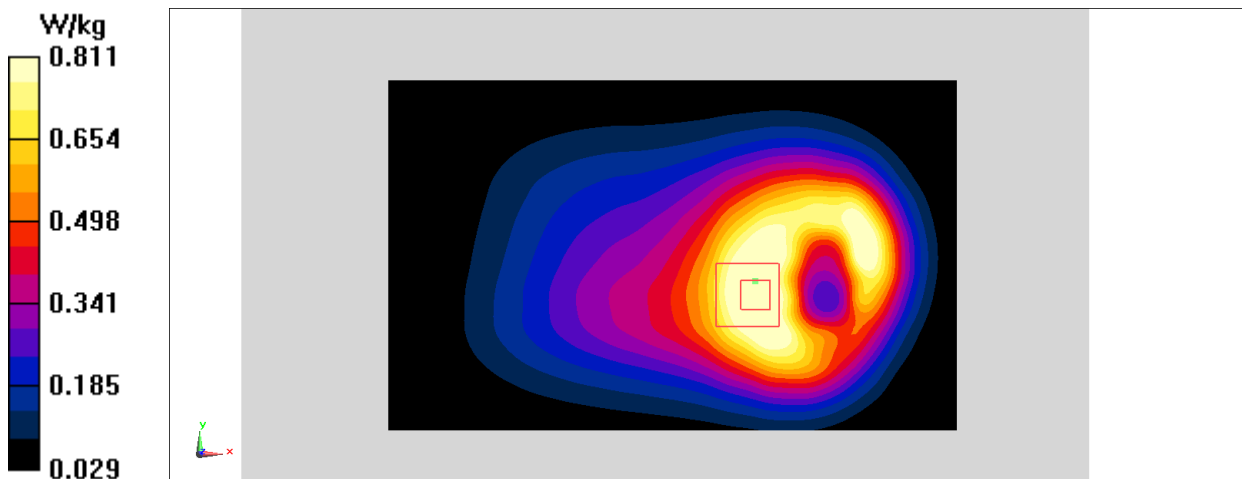


Fig.6 WCDMA 850

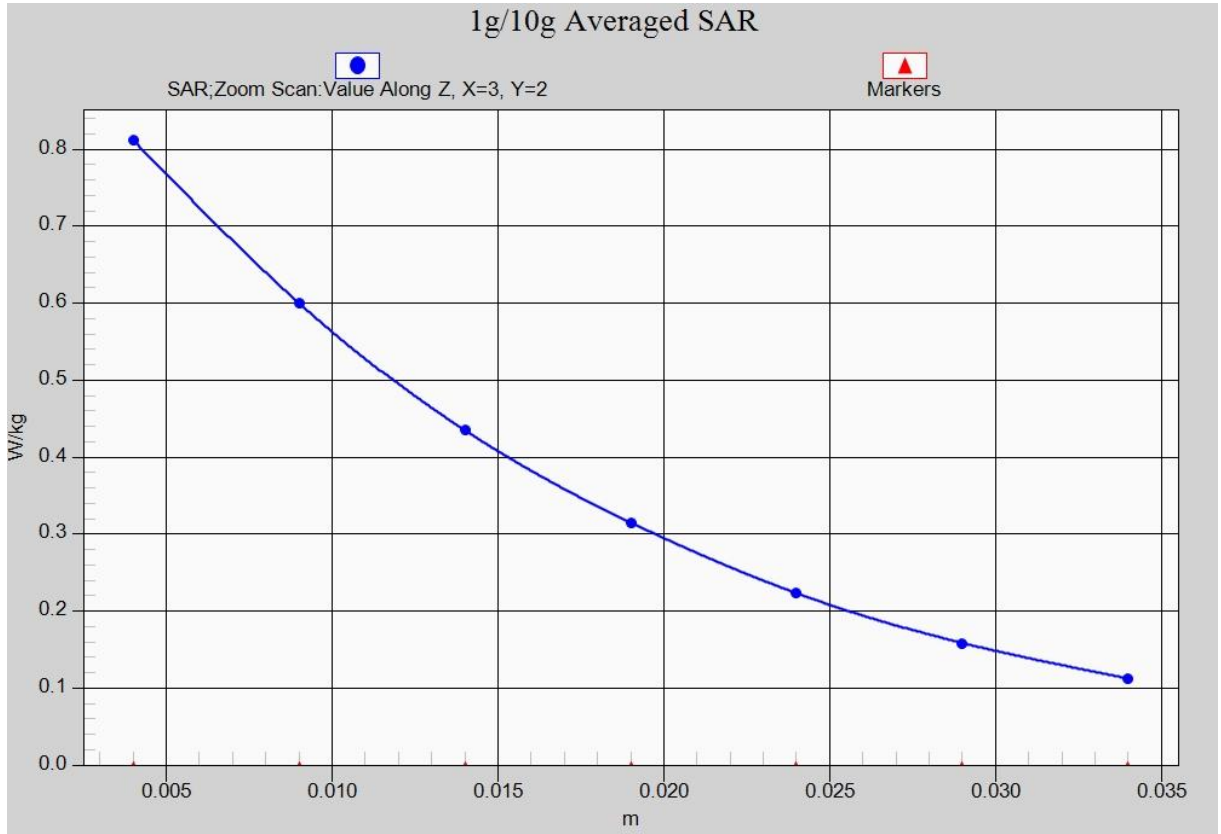


Fig. 6-1 Z-Scan at power reference point (WCDMA850)

### WCDMA 1700Left Cheek Low

Date: 2017-8-13

Electronics: DAE4 Sn1331

Medium: Head 1750 MHz

Medium parameters used (interpolated):  $f = 1712.4$  MHz;  $\sigma = 1.307$  mho/m;  $\epsilon_r = 40.677$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: EX3DV4- SN3846 ConvF(8.16, 8.16, 8.16)

**Area Scan (71x121x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.263 W/kg

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=5mm

Reference Value = 5.815 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.317 W/kg

**SAR(1 g) = 0.237 W/kg; SAR(10 g) = 0.164 W/kg**

Maximum value of SAR (measured) = 0.268 W/kg

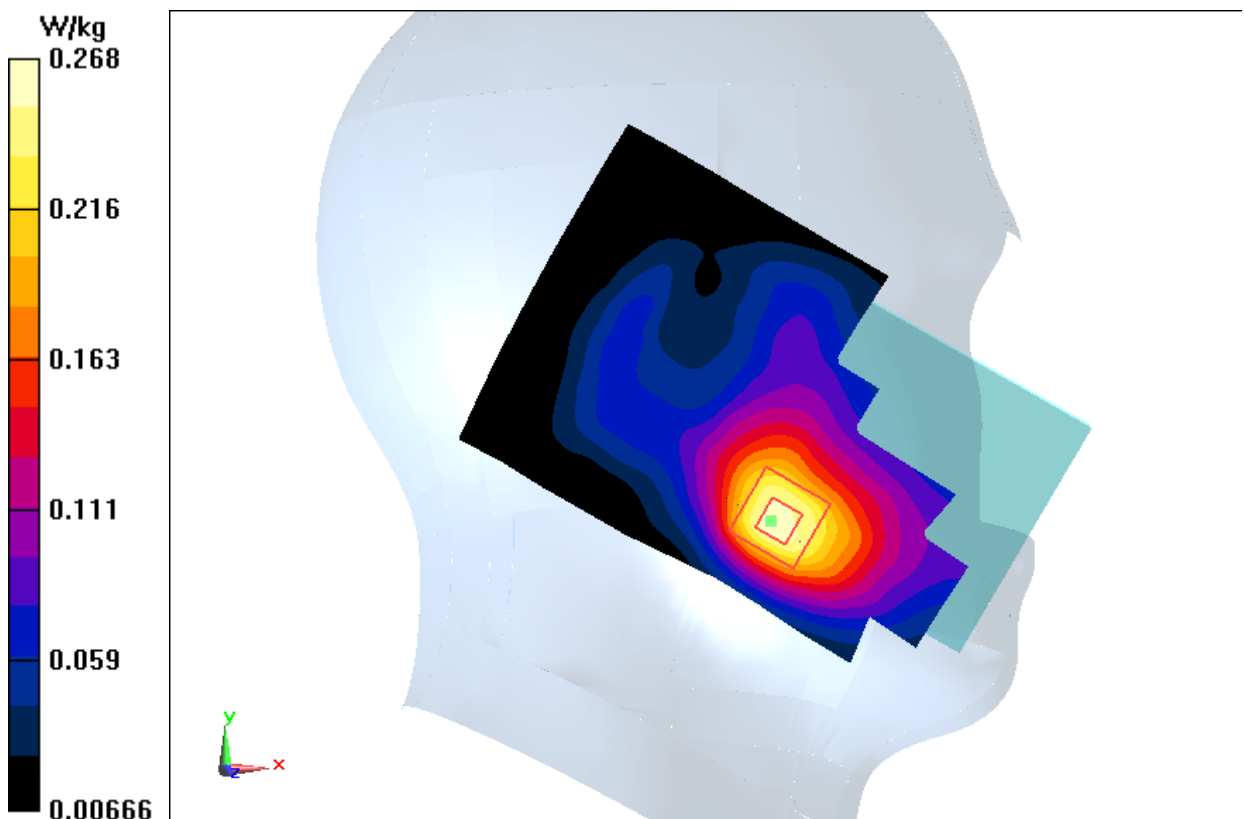


Fig.7WCDMA1700



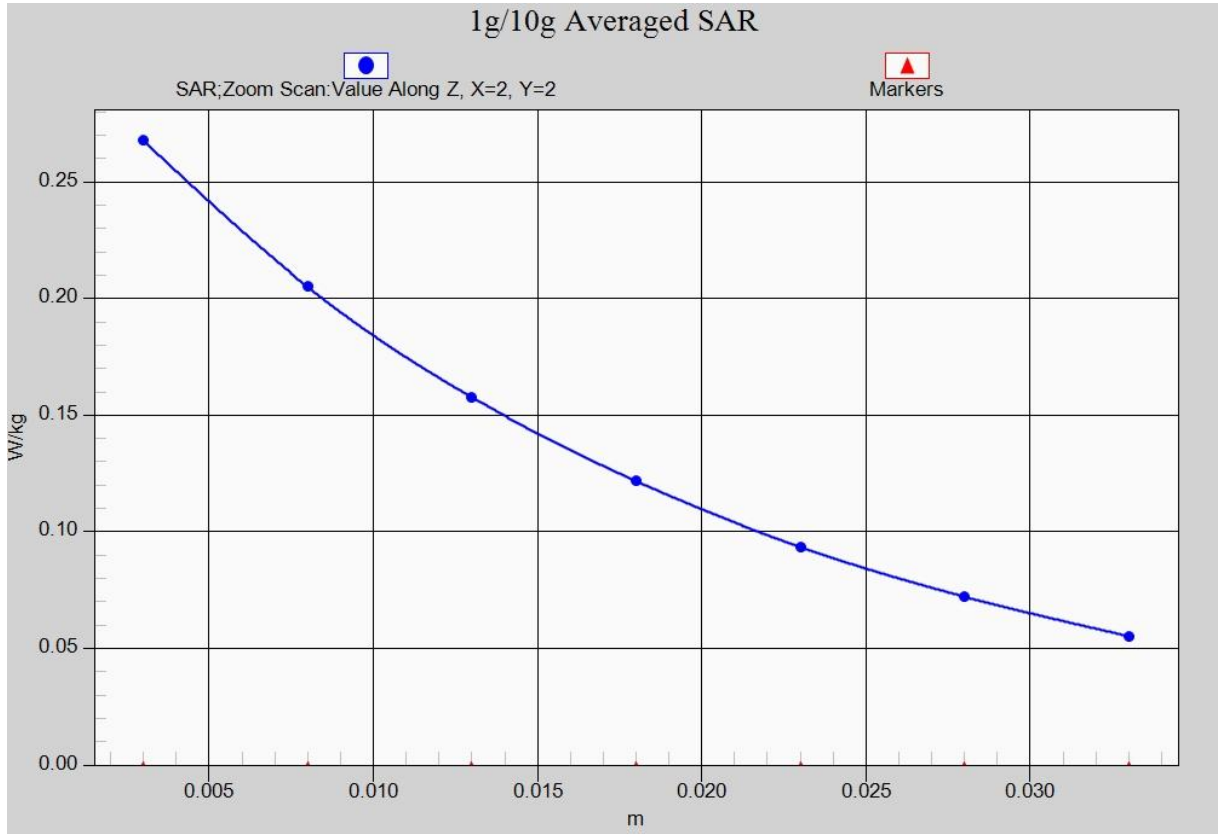


Fig. 7-1 Z-Scan at power reference point (WCDMA1700)

### WCDMA 1700 Body FrontHigh – 10mm

Date: 2017-8-13

Electronics: DAE4 Sn1331

Medium: Body 1750 MHz

Medium parameters used (interpolated):  $f = 1752.6$  MHz;  $\sigma = 1.509$  mho/m;  $\epsilon_r = 53.718$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: WCDMA 1900 Frequency: 1752.6 MHz Duty Cycle: 1:1

Probe: EX3DV4– SN3846 ConvF(7.90, 7.90, 7.90)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.25 W/kg

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

Reference Value = 9.901 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.54 W/kg

**SAR(1 g) = 0.960 W/kg; SAR(10 g) = 0.562 W/kg**

Maximum value of SAR (measured) = 1.06 W/kg

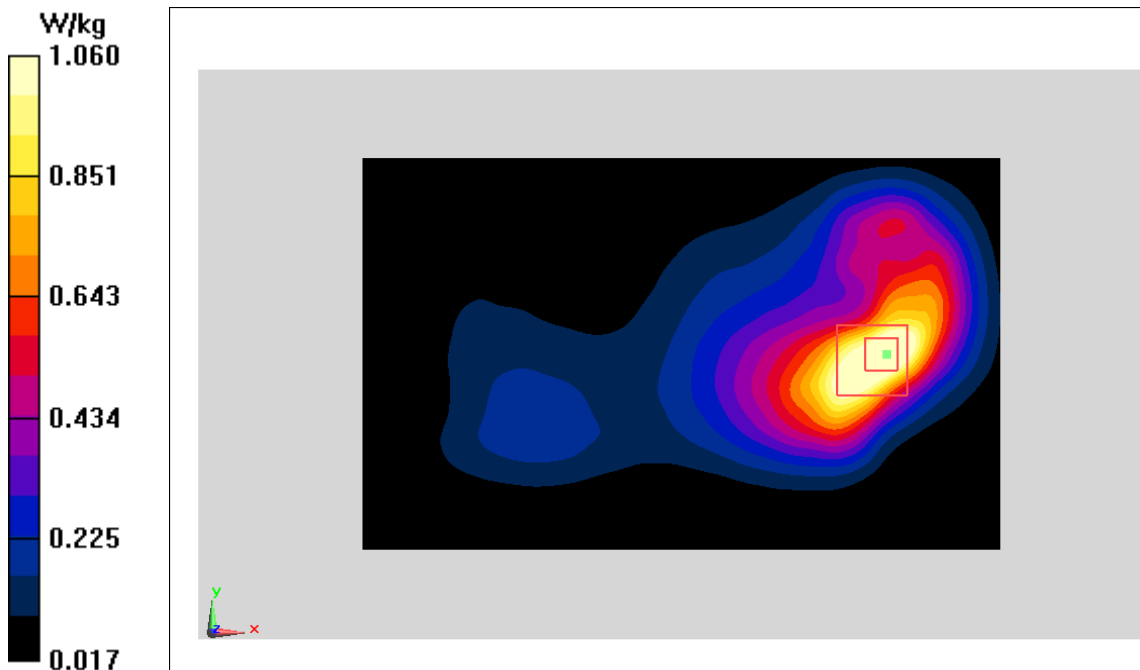


Fig.8WCDMA1700

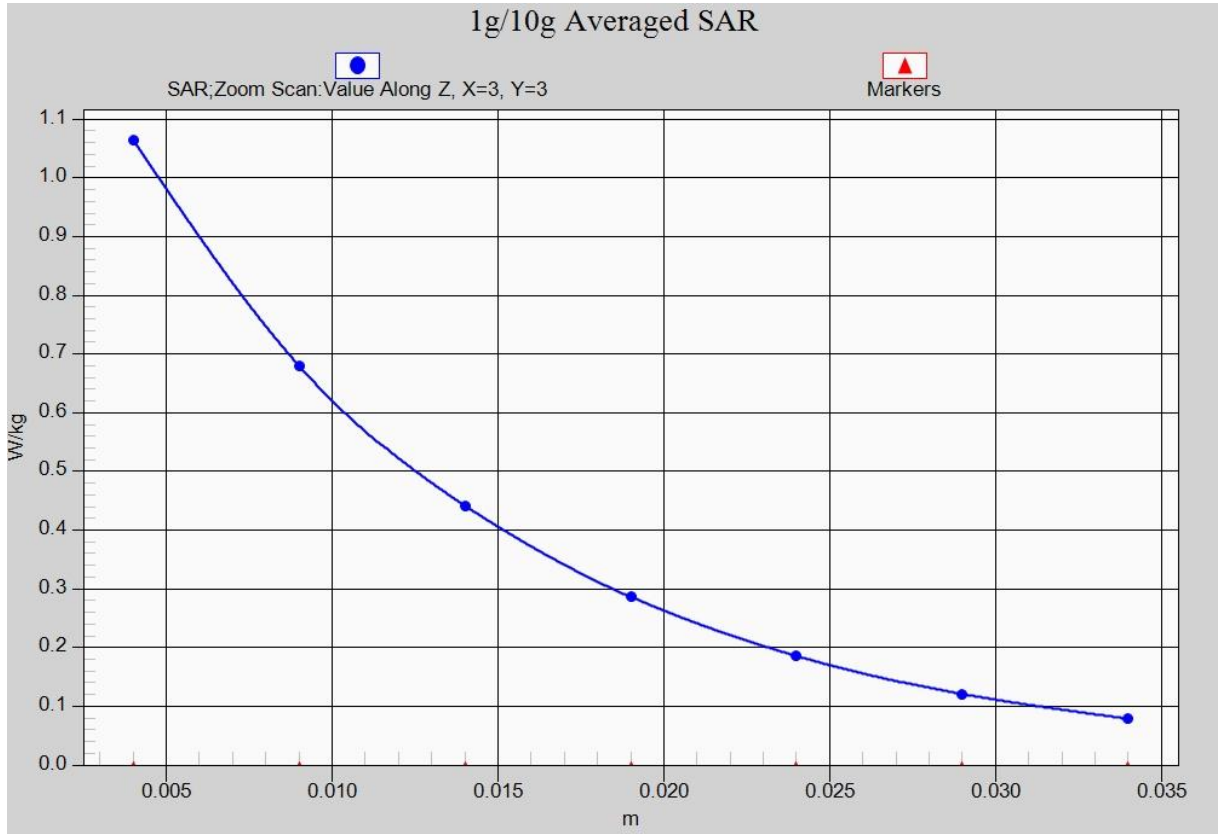


Fig. 8-1 Z-Scan at power reference point (WCDMA1700)

### WCDMA 1700 Body Front Low – 15mm

Date: 2017-8-13

Electronics: DAE4 Sn1331

Medium: Body 1750 MHz

Medium parameters used (interpolated):  $f = 1712.4$  MHz;  $\sigma = 1.481$  mho/m;  $\epsilon_r = 53.828$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: WCDMA 1900 Frequency: 1712.4 MHz Duty Cycle: 1:1

Probe: EX3DV4– SN3846 ConvF(7.90, 7.90, 7.90)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.991 W/kg

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

Reference Value = 9.206 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 1.18 W/kg

**SAR(1 g) = 0.759 W/kg; SAR(10 g) = 0.468 W/kg**

Maximum value of SAR (measured) = 0.831 W/kg

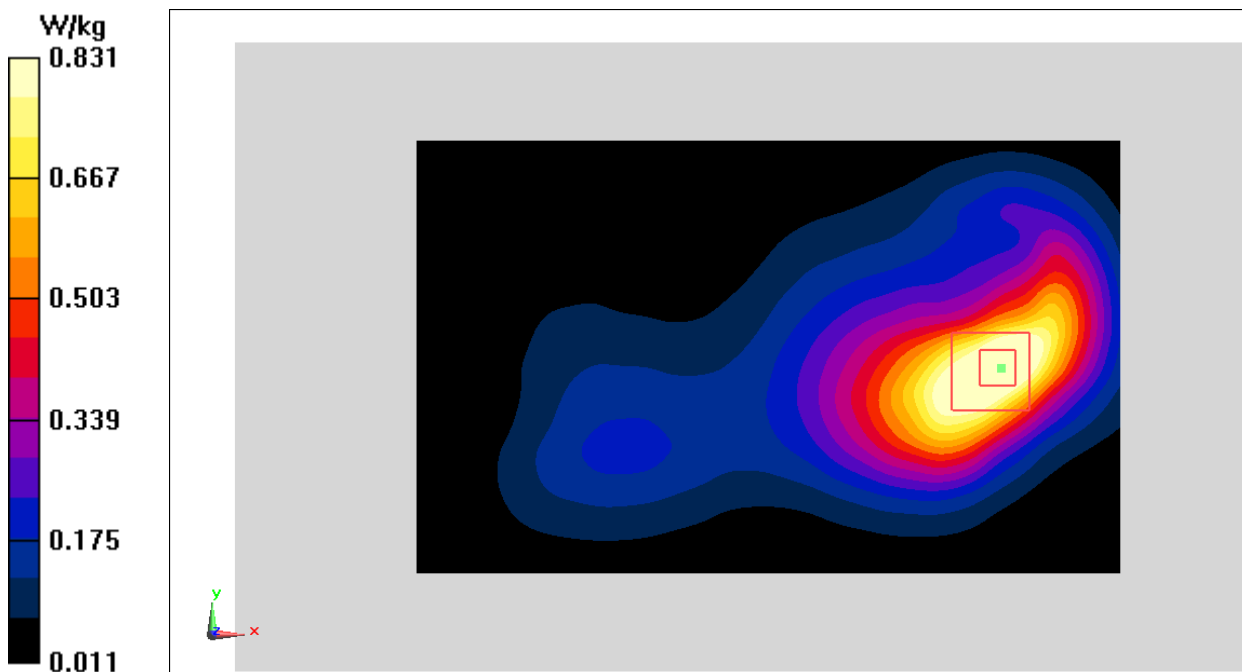


Fig.9WCDMA1700

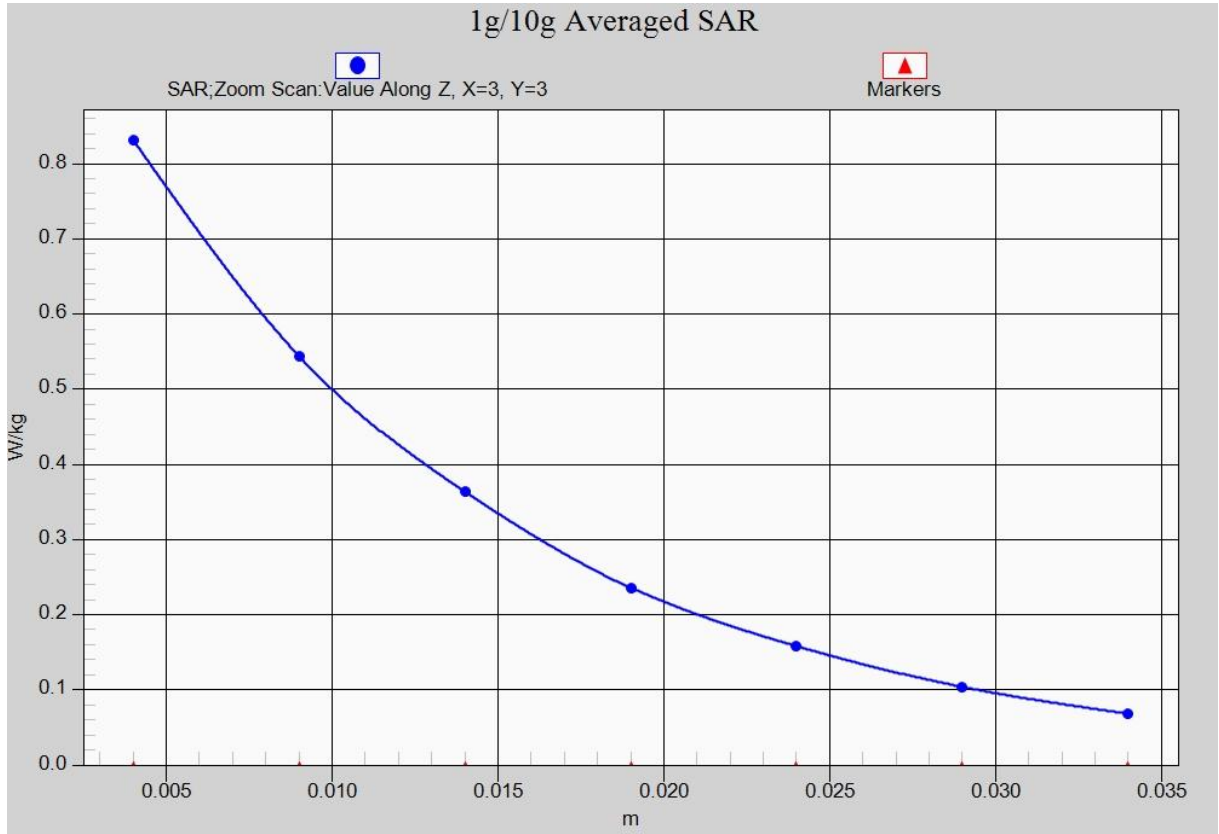


Fig. 9-1 Z-Scan at power reference point (WCDMA1700)

### WCDMA 1900 Left Cheek High

Date: 2017-8-9

Electronics: DAE4 Sn1331

Medium: Head 1900 MHz

Medium parameters used (interpolated):  $f = 1907.6$  MHz;  $\sigma = 1.465$  mho/m;  $\epsilon_r = 40.806$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

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

Probe: EX3DV4-SN3846 ConvF(7.89, 7.89, 7.89)

**Area Scan (71x121x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.183 W/kg

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

Reference Value = 4.674 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.194 W/kg

**SAR(1 g) = 0.138 W/kg; SAR(10 g) = 0.095 W/kg**

Maximum value of SAR (measured) = 0.157 W/kg

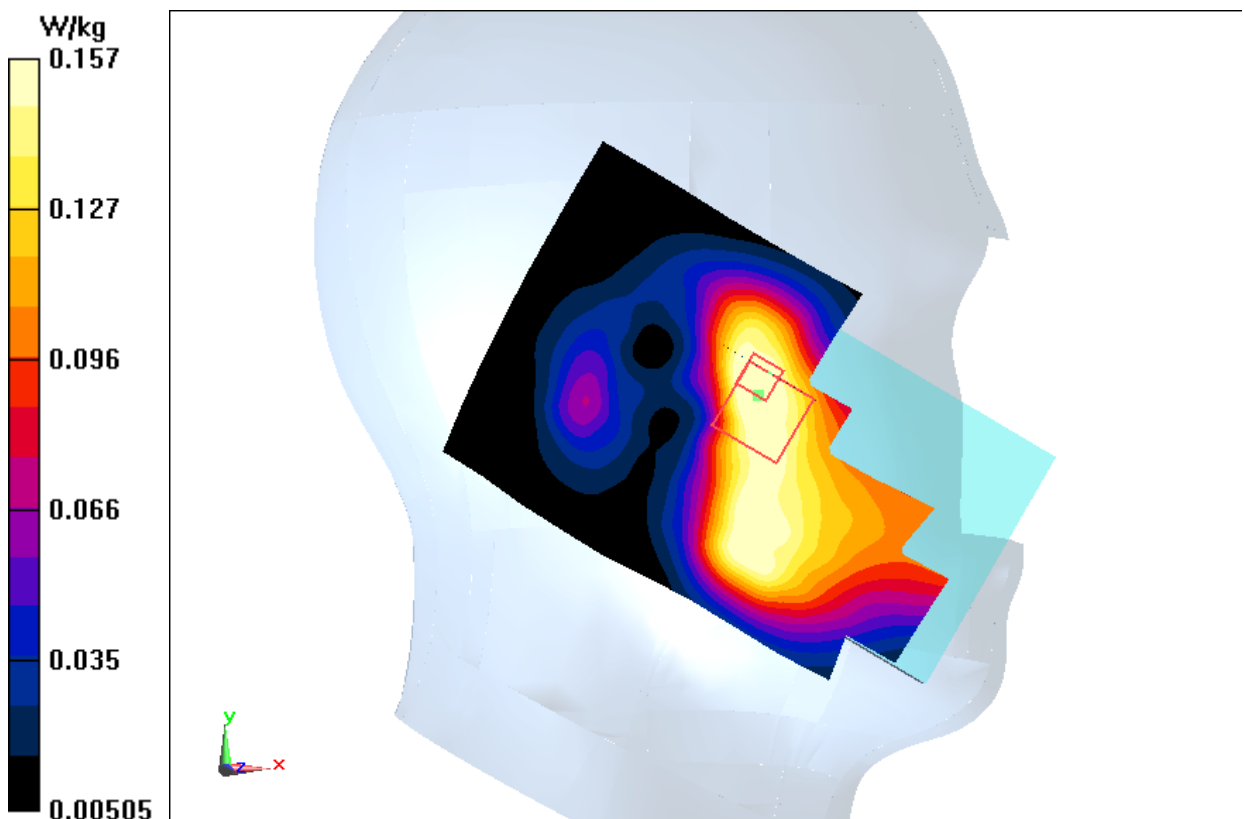


Fig.10WCDMA1900

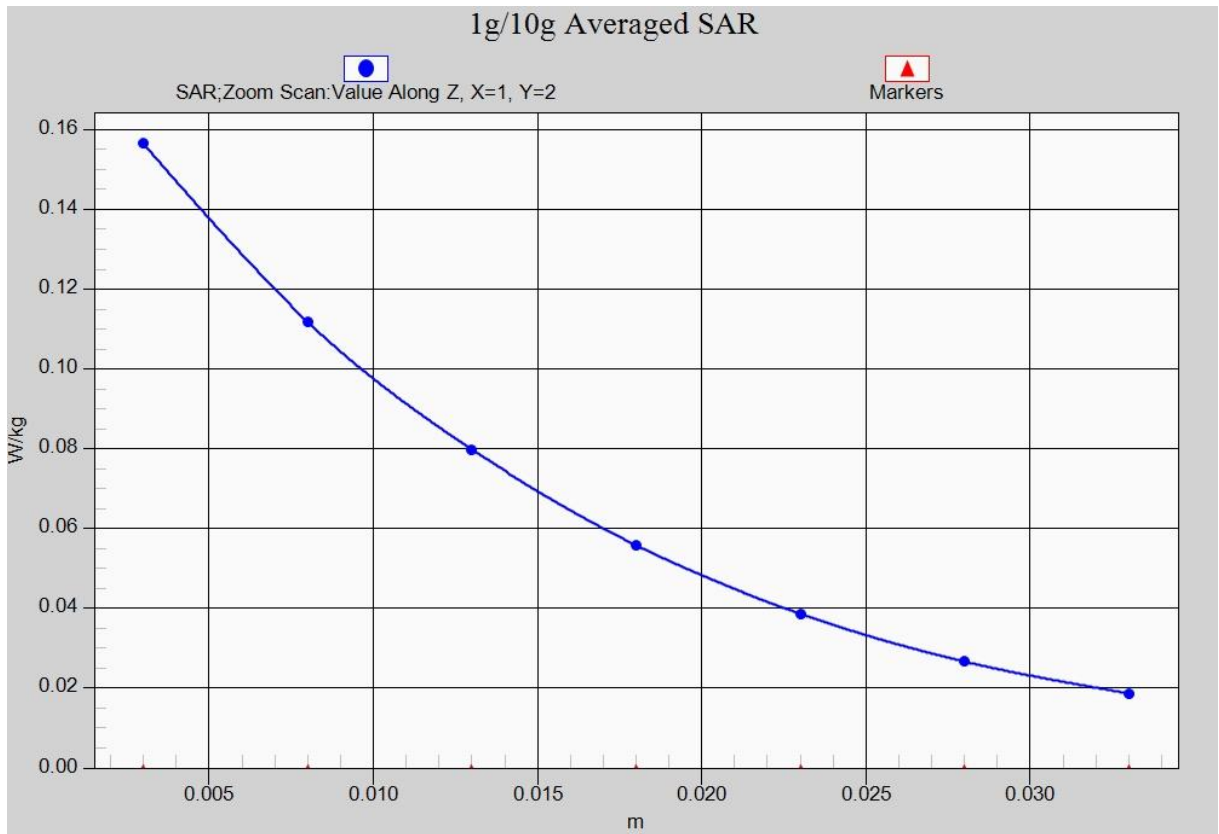


Fig. 10-1 Z-Scan at power reference point (WCDMA1900)

### WCDMA 1900 Body FrontLow

Date: 2017-8-9

Electronics: DAE4 Sn1331

Medium: Body 1900 MHz

Medium parameters used (interpolated):  $f = 1852.4$  MHz;  $\sigma = 1.501$  mho/m;  $\epsilon_r = 53.18$ ;  $\rho = 1000$  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-SN3846 ConvF(7.57, 7.57, 7.57)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.69 W/kg

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

Reference Value = 14.14 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 2.03 W/kg

**SAR(1 g) = 1.22 W/kg; SAR(10 g) = 0.708 W/kg**

Maximum value of SAR (measured) = 1.37 W/kg

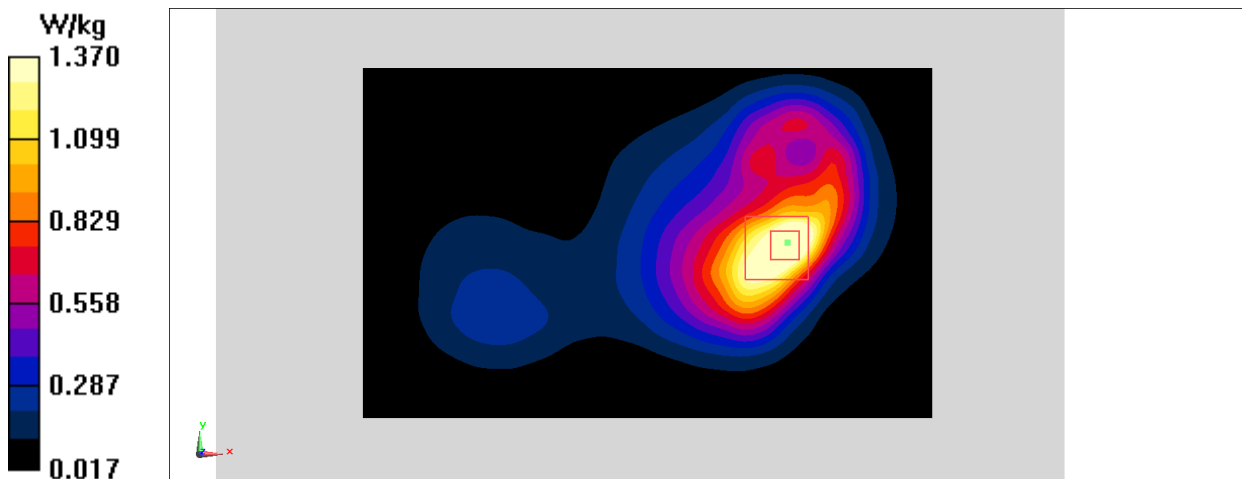


Fig.11WCDMA1900



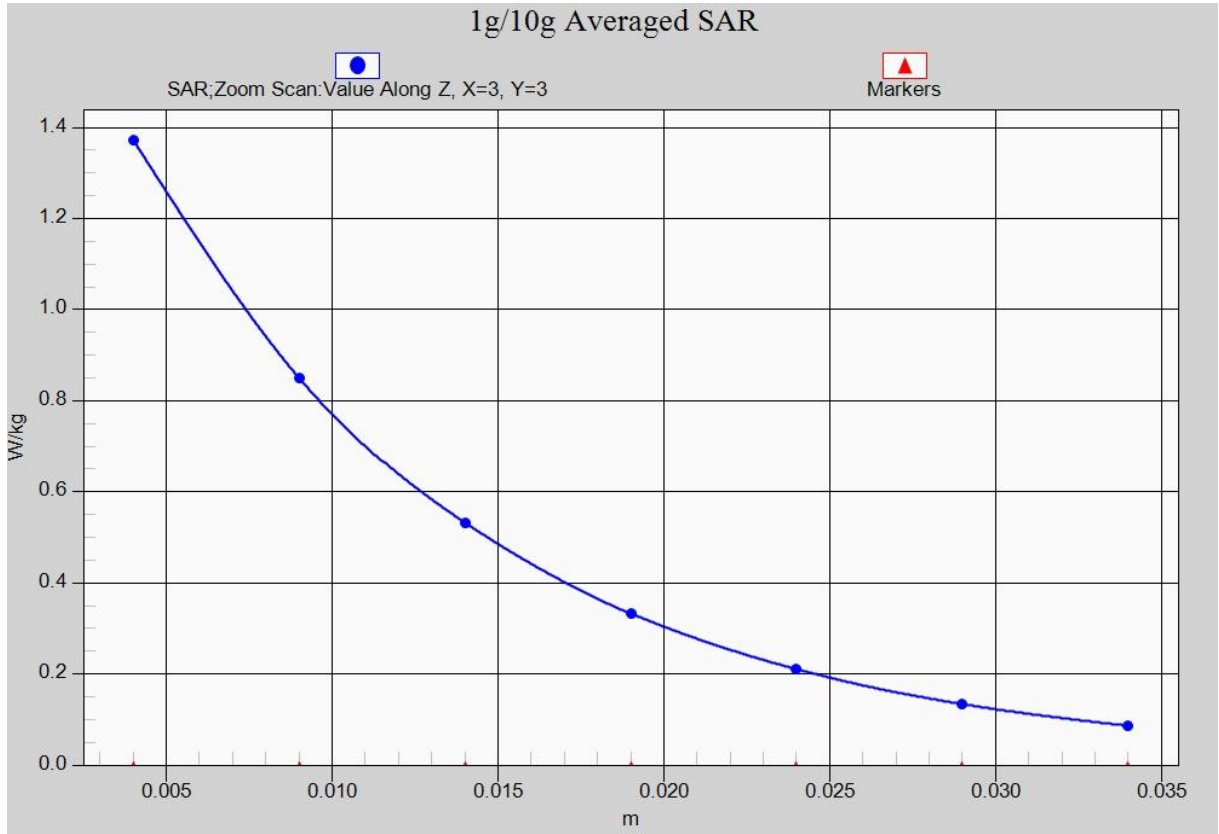


Fig. 11-1 Z-Scan at power reference point (WCDMA1900)

### LTE Band2Left Cheek High with QPSK\_20M\_1RB\_Low

Date: 2017-8-9

Electronics: DAE4 Sn1331

Medium: Head 1900 MHz

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.411$  mho/m;  $\epsilon_r = 40.61$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band2Frequency: 1900 MHz Duty Cycle: 1:1

Probe: EX3DV4-SN3846 ConvF(7.89, 7.89, 7.89)

**Area Scan (71x121x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.216 W/kg

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

Reference Value = 4.889 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.236 W/kg

**SAR(1 g) = 0.163 W/kg; SAR(10 g) = 0.108 W/kg**

Maximum value of SAR (measured) = 0.189 W/kg

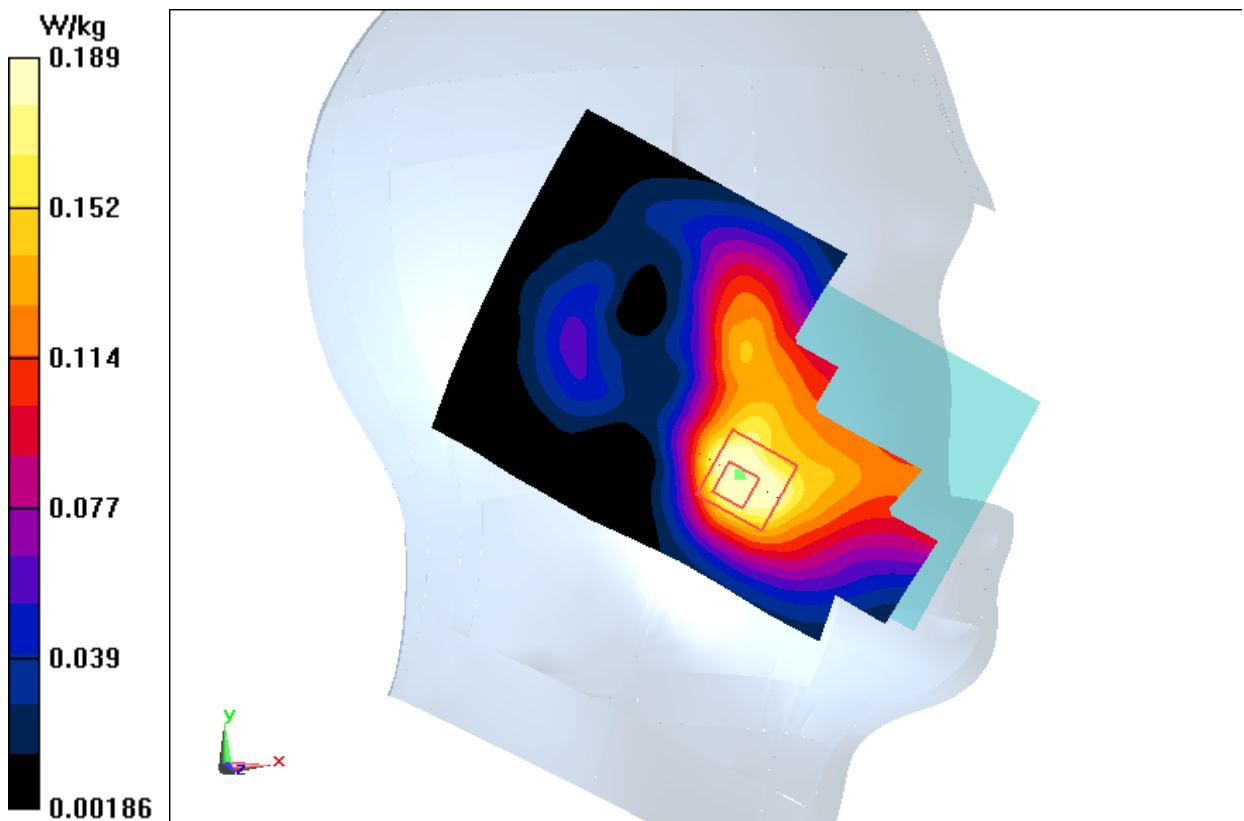


Fig.12 LTE Band2

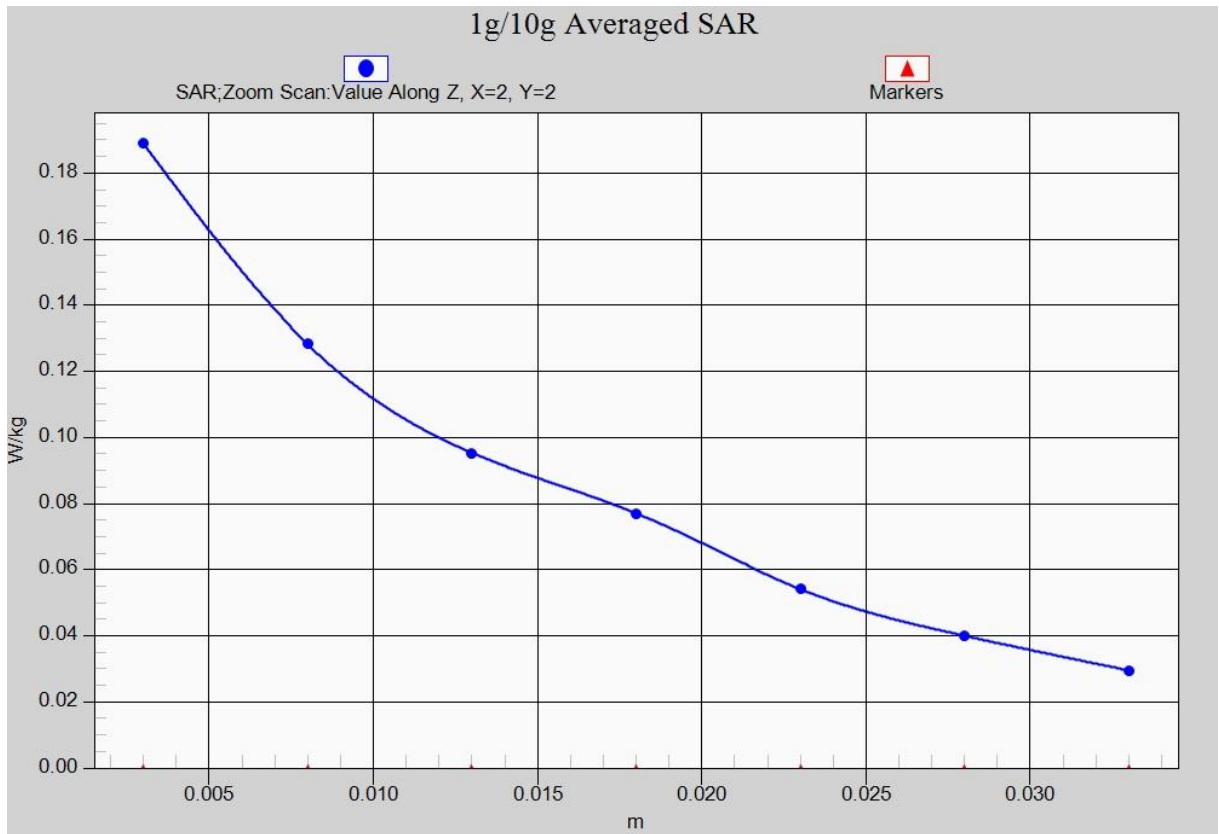


Fig. 12-1 Z-Scan at power reference point (LTE Band2)

### LTE Band2Body RearHigh with QPSK\_20M\_1RB\_Low

Date: 2017-8-9

Electronics: DAE4 Sn1331

Medium: Body 1900 MHz

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.507$  mho/m;  $\epsilon_r = 52.71$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band2 Frequency: 1900 MHz Duty Cycle: 1:1

Probe: EX3DV4-SN3846 ConvF(7.57, 7.57, 7.57)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.925 W/kg

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

Reference Value = 9.879 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.23 W/kg

**SAR(1 g) = 0.761 W/kg; SAR(10 g) = 0.444 W/kg**

Maximum value of SAR (measured) = 0.870 W/kg

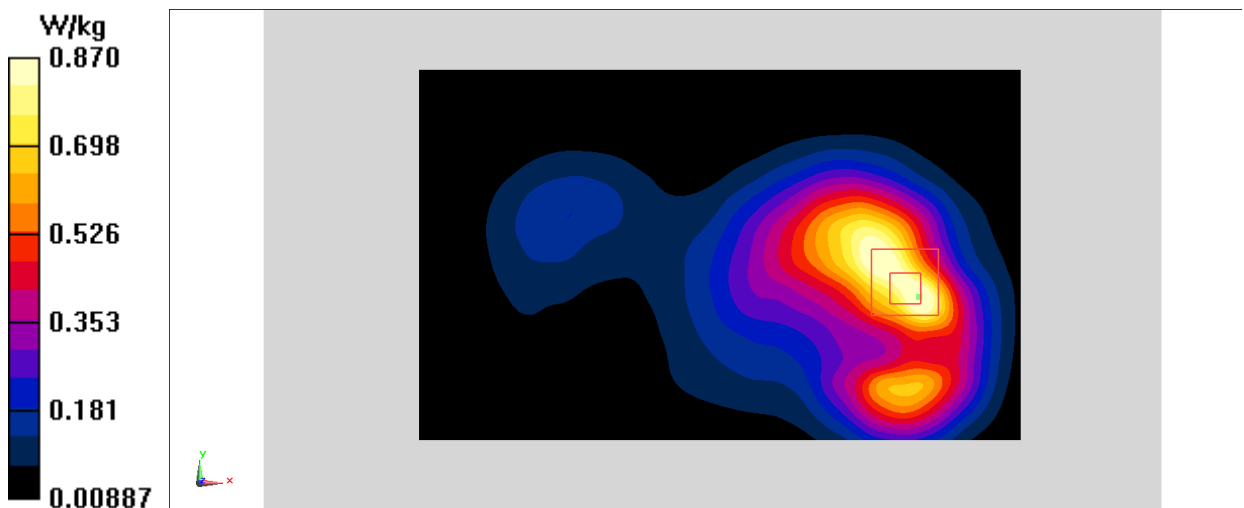


Fig.13 LTE Band2

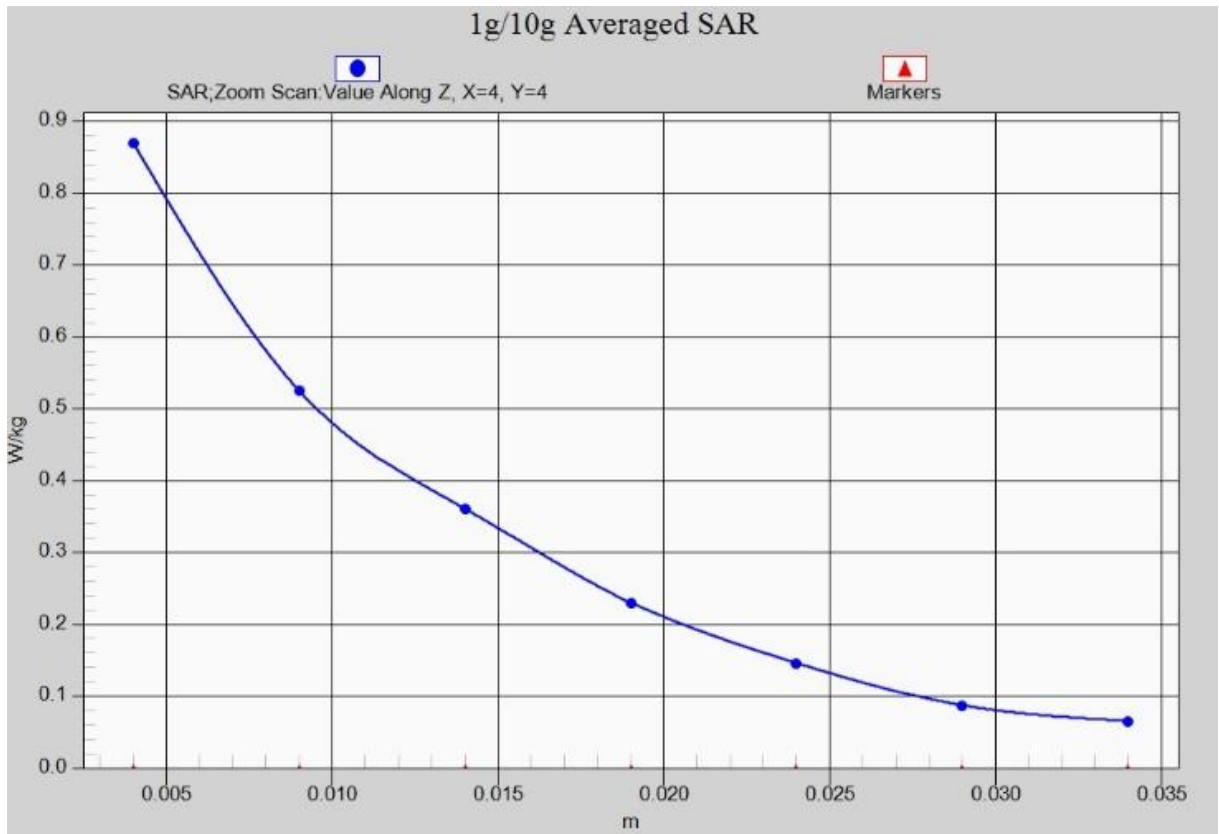


Fig. 13-1 Z-Scan at power reference point (LTE Band2)

### LTE Band5 RightCheek Low with QPSK\_10M\_1RB\_High

Date: 2017-8-8

Electronics: DAE4 Sn1331

Medium: Head 850 MHz

Medium parameters used (interpolated):  $f = 829$  MHz;  $\sigma = 0.904$  mho/m;  $\epsilon_r = 41.851$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band5 Frequency: 829 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3846 ConvF(9.33, 9.33, 9.33)

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

Maximum value of SAR (interpolated) = 0.452 W/kg

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

Reference Value = 6.428 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.527 W/kg

**SAR(1 g) = 0.407 W/kg; SAR(10 g) = 0.310 W/kg**

Maximum value of SAR (measured) = 0.444 W/kg

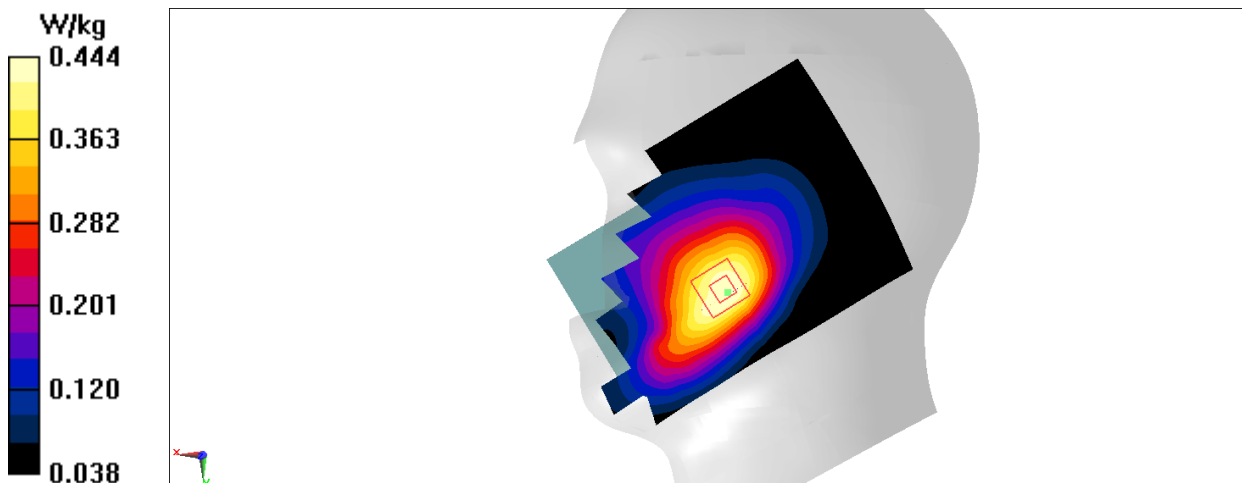
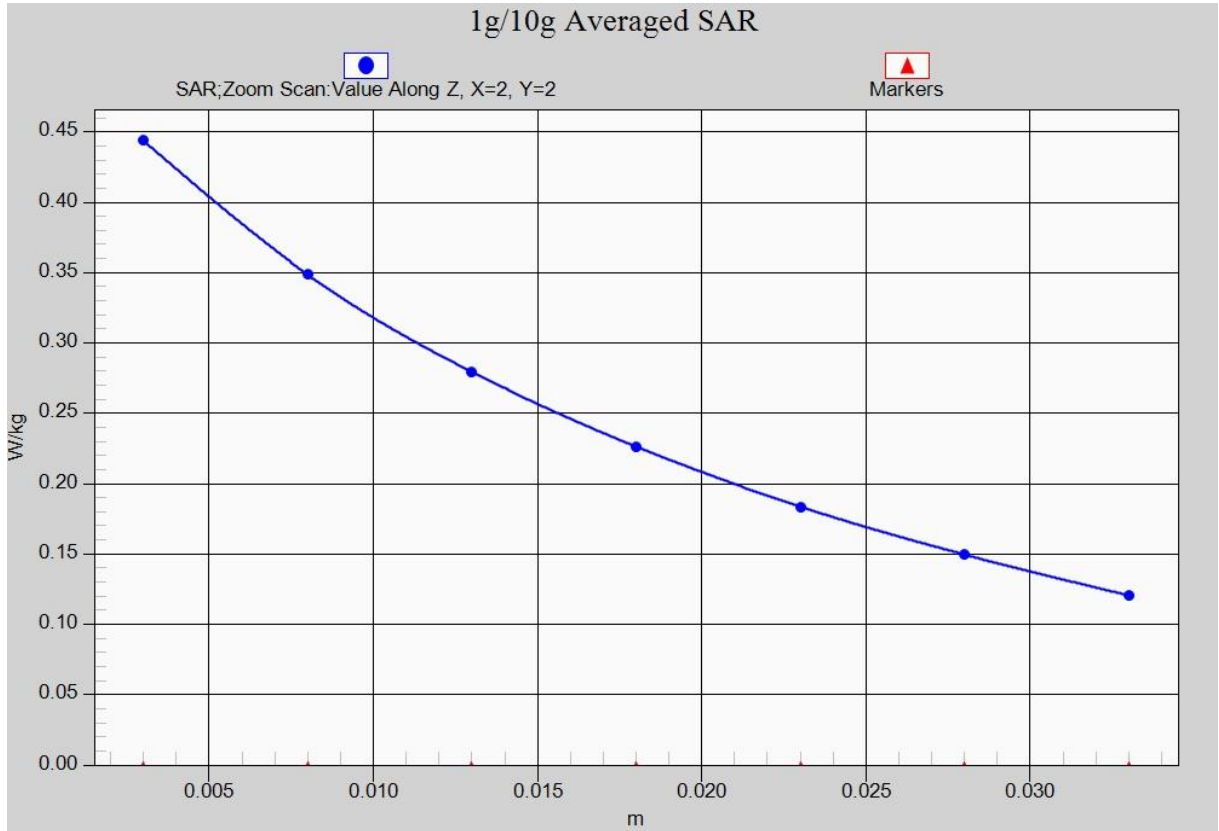


Fig.14 LTE Band5



**Fig. 14-1 Z-Scan at power reference point (LTE Band5)**

### LTE Band5 Body RearLow with QPSK\_10M\_1RB\_High

Date: 2017-8-8

Electronics: DAE4 Sn1331

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 829$  MHz;  $\sigma = 1.003$  mho/m;  $\epsilon_r = 55.694$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band5 Frequency: 829 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3846 ConvF(9.52, 9.52, 9.52)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.766 W/kg

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

Reference Value = 15.71 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.869 W/kg

**SAR(1 g) = 0.641 W/kg; SAR(10 g) = 0.461 W/kg**

Maximum value of SAR (measured) = 0.683 W/kg

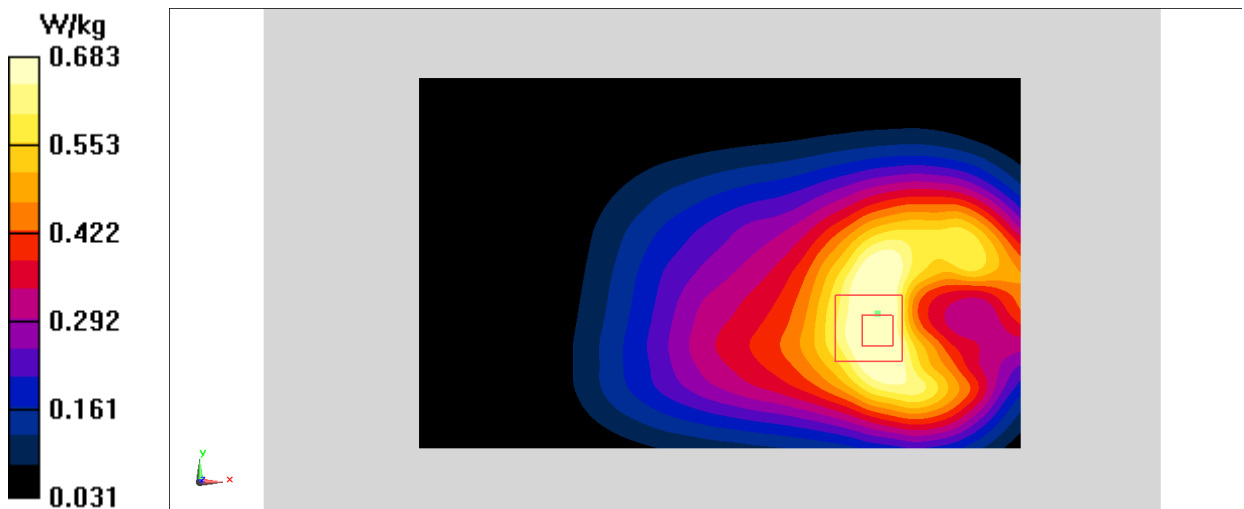


Fig.15 LTE Band5



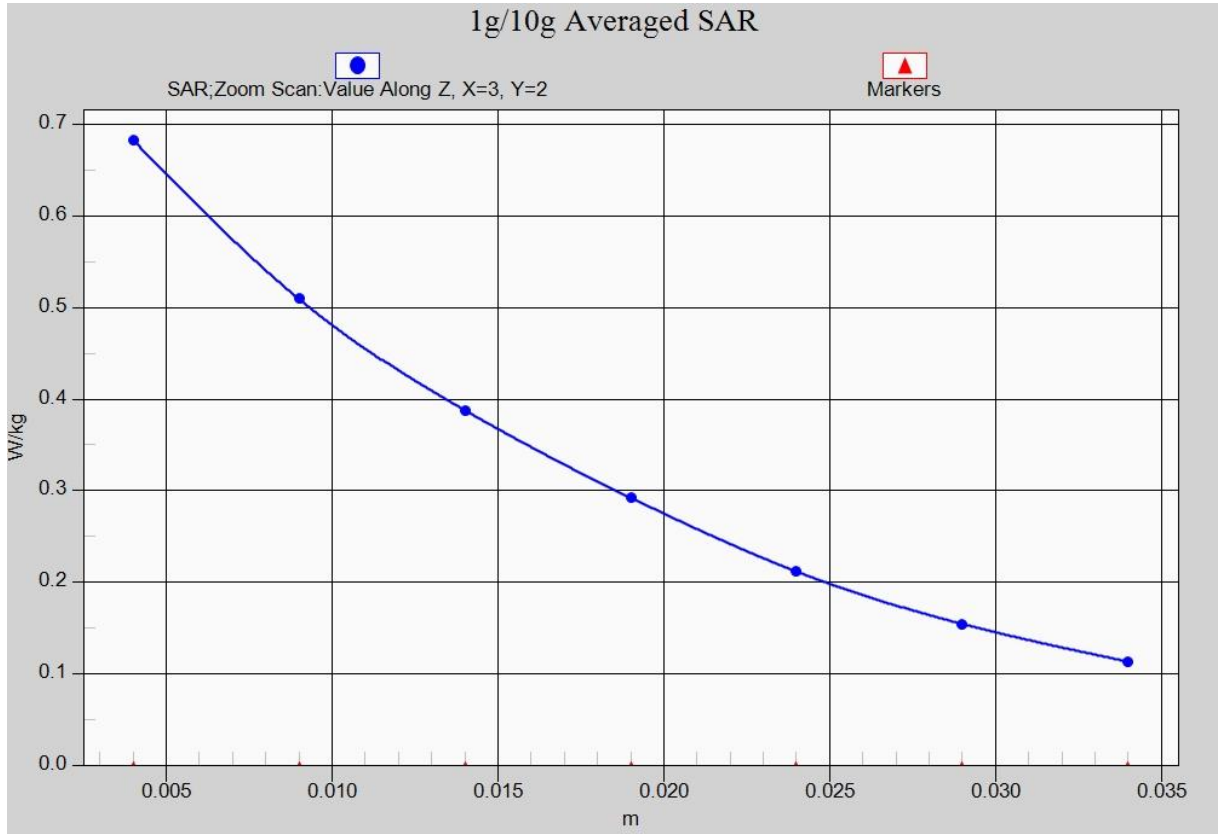


Fig. 15-1 Z-Scan at power reference point (LTE Band5)

### LTE Band7Right Cheek Low with QPSK\_20M\_1RB\_Low

Date: 2017-8-12

Electronics: DAE4 Sn1331

Medium: Head2600 MHz

Medium parameters used:  $f = 2510$  MHz;  $\sigma = 1.925$  mho/m;  $\epsilon_r = 38.52$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band7Frequency: 2510 MHz Duty Cycle: 1:1

Probe: EX3DV4-SN3846 ConvF(7.12, 7.12, 7.12)

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

Maximum value of SAR (interpolated) = 0.498 W/kg

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

Reference Value = 3.725 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.641 W/kg

**SAR(1 g) = 0.347 W/kg; SAR(10 g) = 0.183 W/kg**

Maximum value of SAR (measured) = 0.434 W/kg

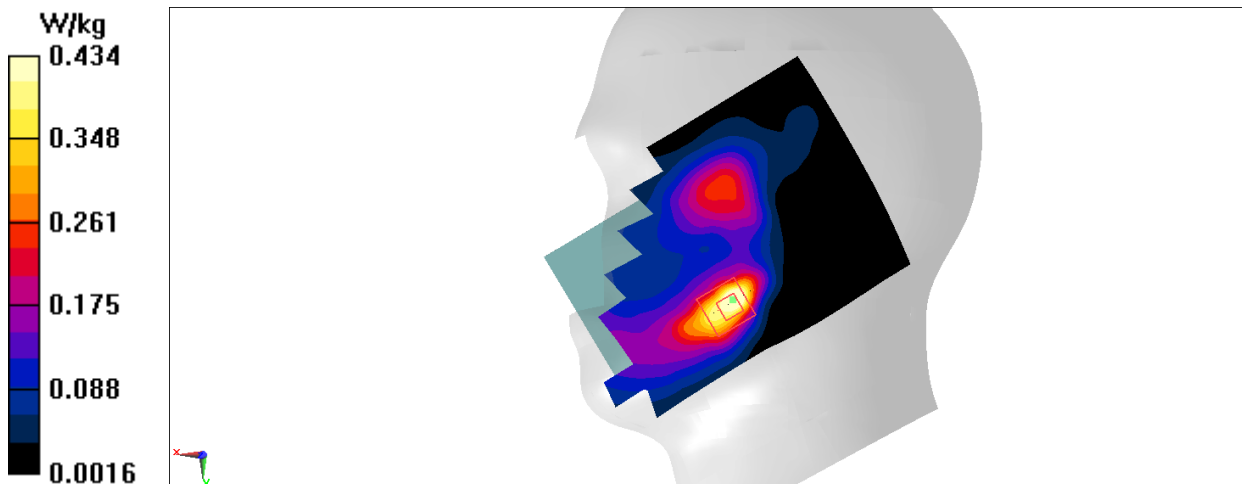


Fig.16 LTE Band7

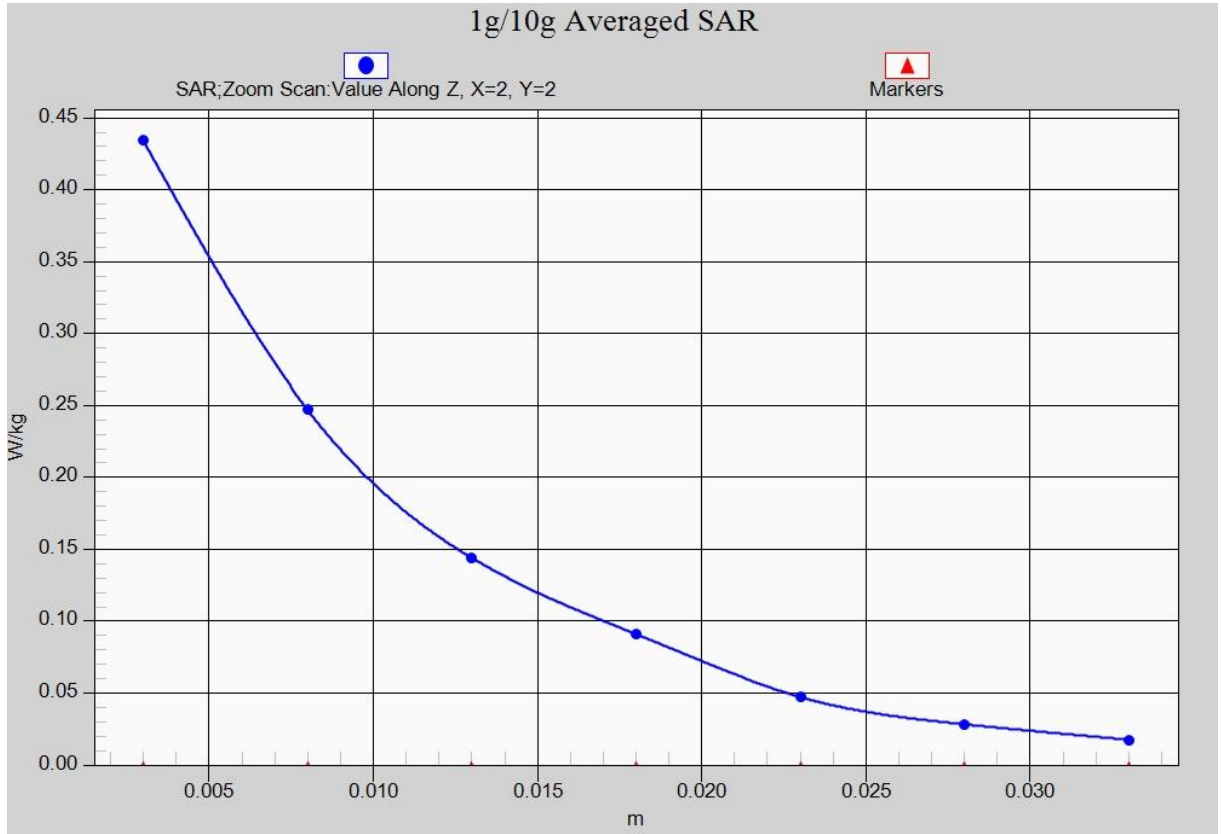


Fig. 16-1 Z-Scan at power reference point (LTE Band7)

**LTE Band7Body BottomLow with QPSK\_20M\_100RB – 10mm**

Date: 2017-8-12

Electronics: DAE4 Sn1331

Medium: Body2600 MHz

Medium parameters used:  $f = 2510$  MHz;  $\sigma = 2.095$  mho/m;  $\epsilon_r = 51.85$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band7 Frequency: 2510 MHz Duty Cycle: 1:1

Probe: EX3DV4–SN3846 ConvF(7.25, 7.25, 7.25)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.45 W/kg

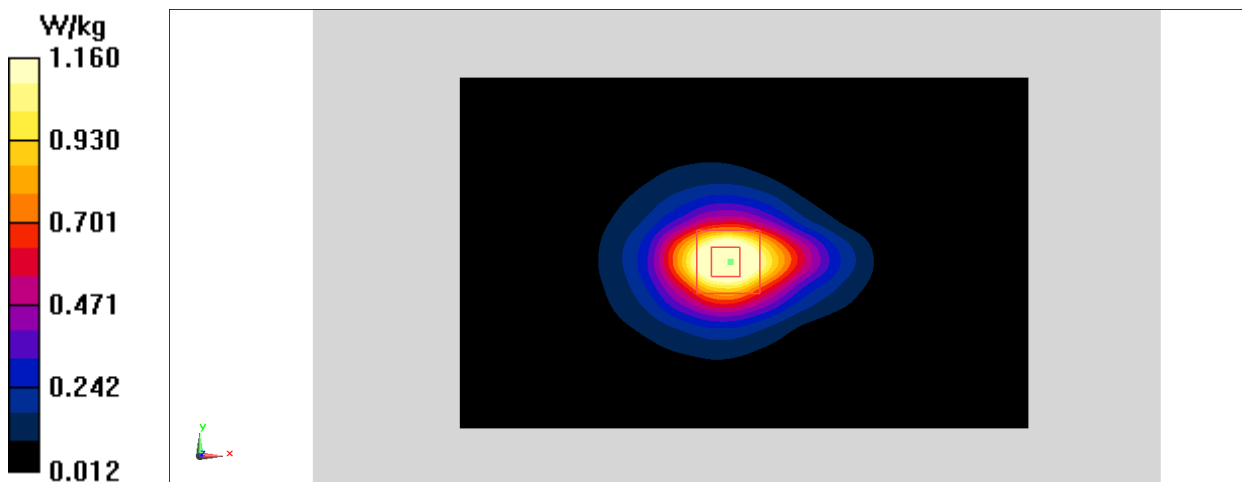
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 23.05 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.87 W/kg

**SAR(1 g) = 1.04 W/kg; SAR(10 g) = 0.538 W/kg**

Maximum value of SAR (measured) = 1.16 W/kg



**Fig.17 LTE Band7**

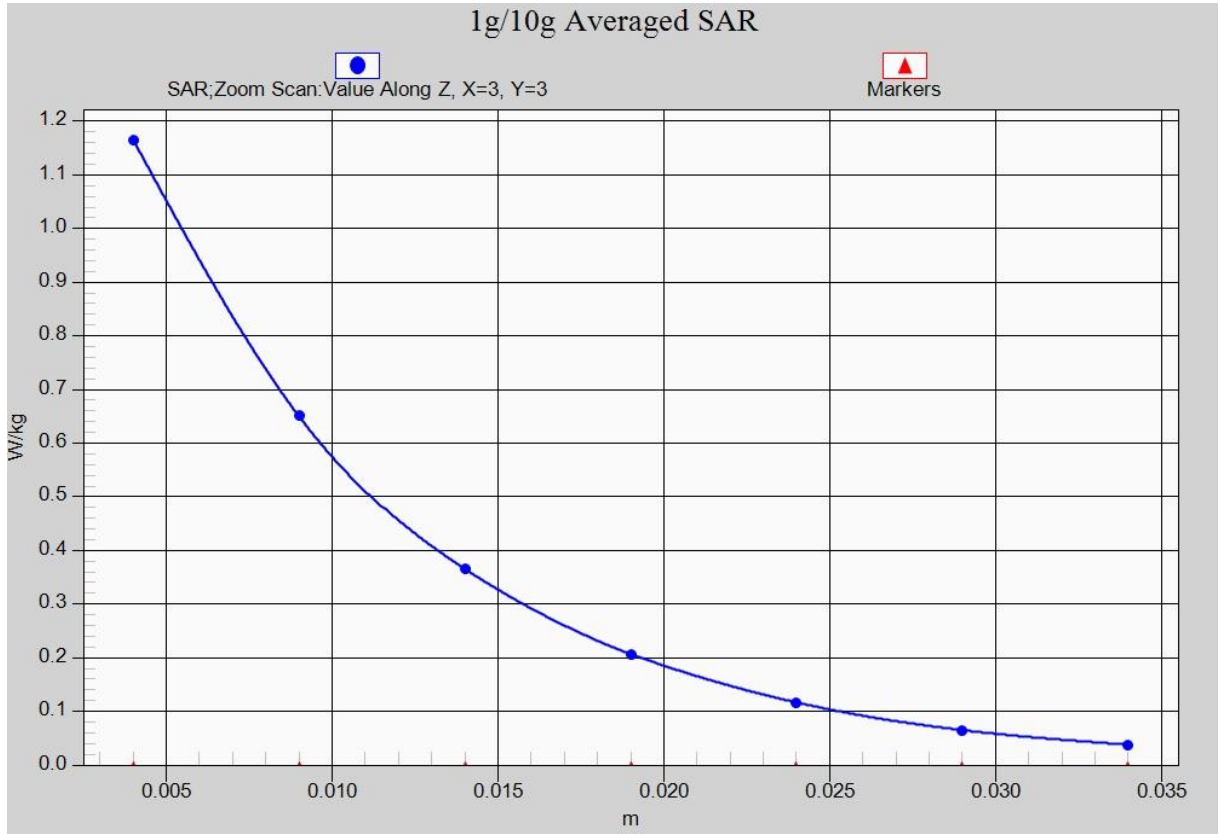


Fig. 17-1 Z-Scan at power reference point (LTE Band7)

### LTE Band7Body FrontLow with QPSK\_20M\_1RB\_Low – 15mm

Date: 2017-8-12

Electronics: DAE4 Sn1331

Medium: Body2600 MHz

Medium parameters used:  $f = 2510$  MHz;  $\sigma = 2.095$  mho/m;  $\epsilon_r = 51.85$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band7 Frequency: 2510 MHz Duty Cycle: 1:1

Probe: EX3DV4– SN3846 ConvF(7.25, 7.25, 7.25)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.653 W/kg

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

Reference Value = 4.752 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.822 W/kg

**SAR(1 g) = 0.488 W/kg; SAR(10 g) = 0.278 W/kg**

Maximum value of SAR (measured) = 0.529 W/kg

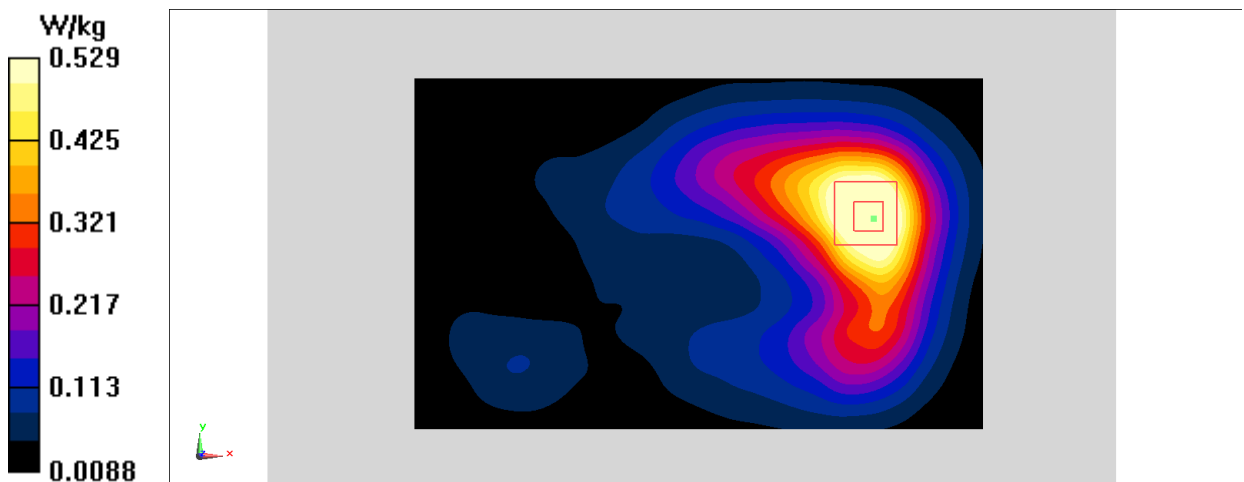


Fig.18 LTE Band7

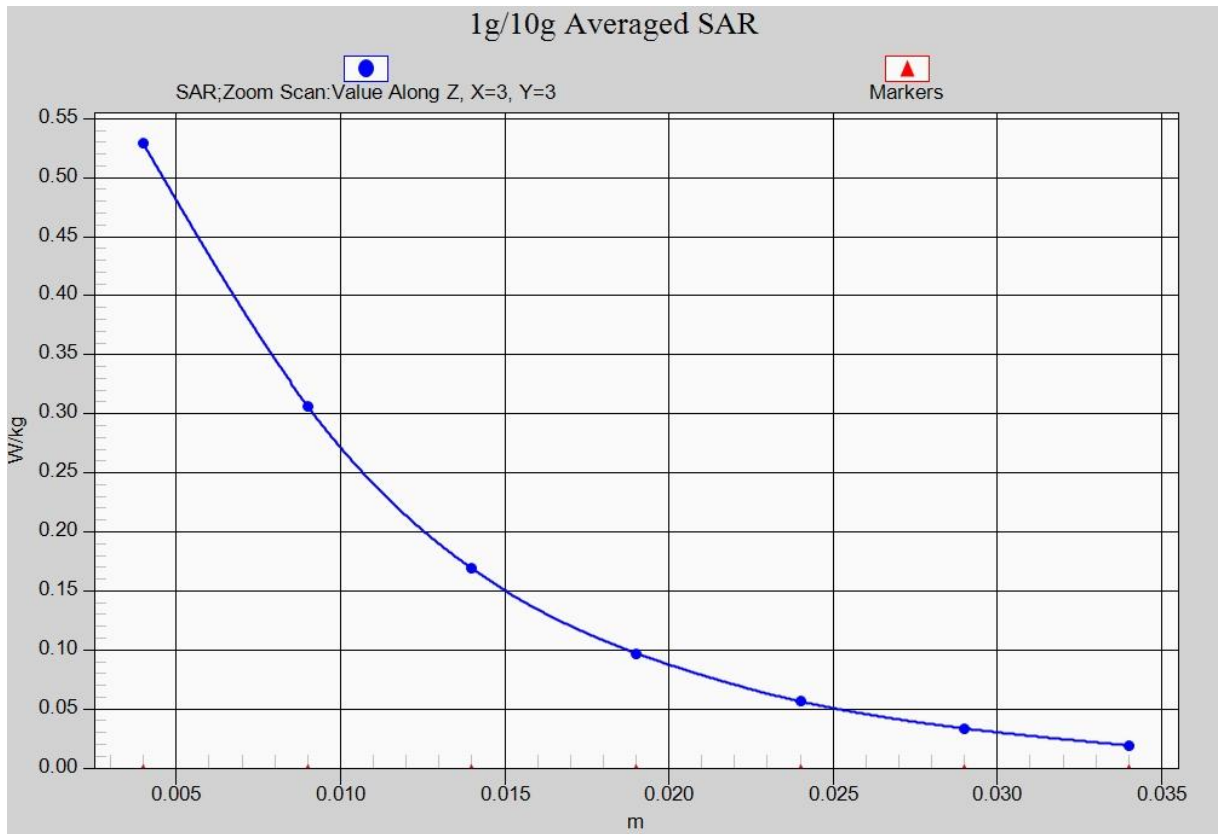


Fig. 18-1 Z-Scan at power reference point (LTE Band7)

### LTE Band12Right Cheek High with QPSK\_10M\_1RB\_High

Date: 2017-8-10

Electronics: DAE4 Sn1331

Medium: Head750 MHz

Medium parameters used (interpolated):  $f = 711$  MHz;  $\sigma = 0.861$  mho/m;  $\epsilon_r = 42.25$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band12Frequency: 711 MHz Duty Cycle: 1:1

Probe: EX3DV4-SN3846 ConvF(10.47,10.47, 10.47)

**Area Scan (81x131x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.169 W/kg

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

Reference Value = 3.600 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.188 W/kg

**SAR(1 g) = 0.147 W/kg; SAR(10 g) = 0.119 W/kg**

Maximum value of SAR (measured) = 0.156 W/kg

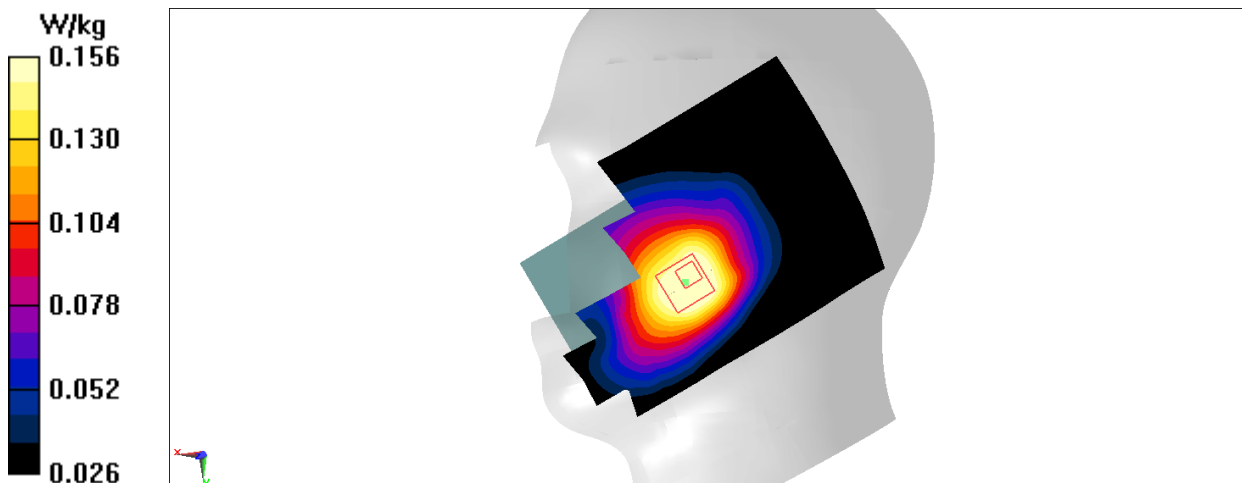


Fig.19 LTE Band12



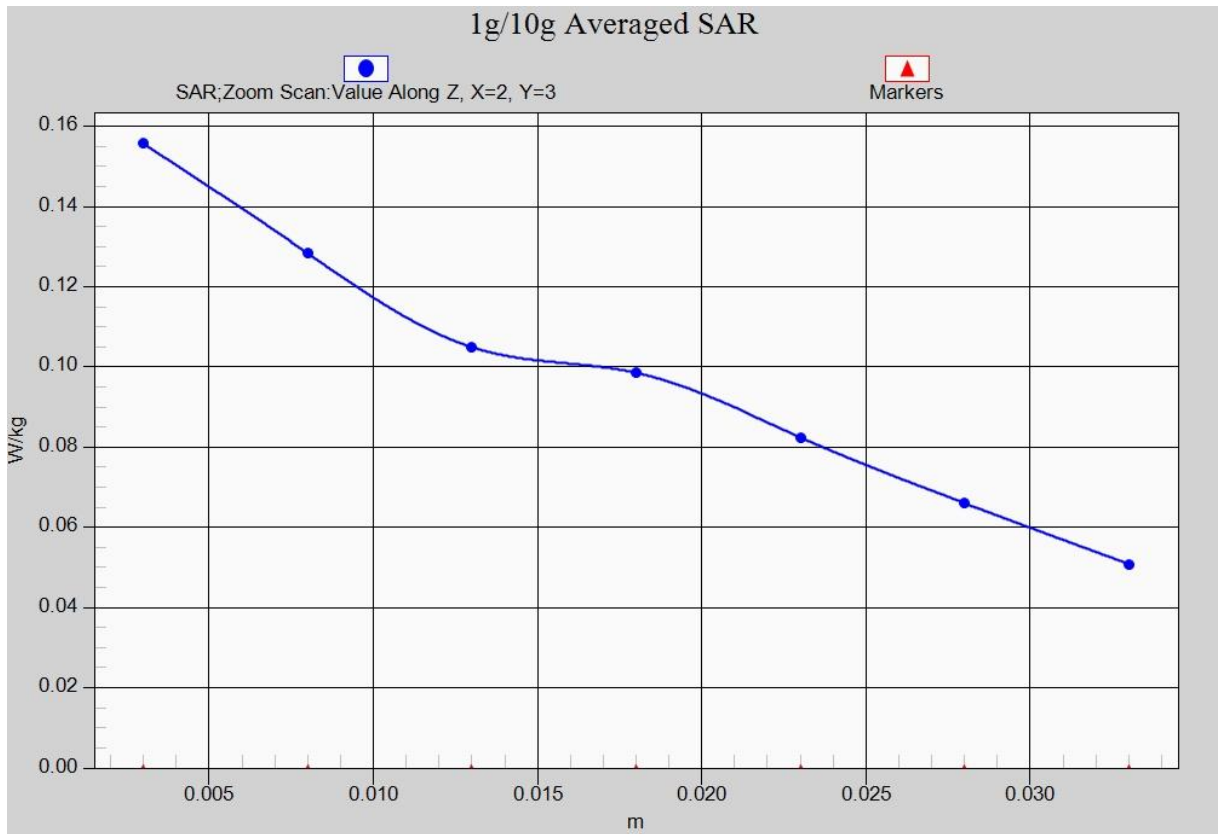


Fig. 19-1 Z-Scan at power reference point (LTE Band12)

### LTE Band12Body Rear High with QPSK\_10M\_1RB\_High

Date: 2017-8-10

Electronics: DAE4 Sn1331

Medium: Body750 MHz

Medium parameters used (interpolated):  $f = 711$  MHz;  $\sigma = 0.933$  mho/m;  $\epsilon_r = 56.45$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band12Frequency: 711 MHz Duty Cycle: 1:1

Probe: EX3DV4-SN3846 ConvF(9.96, 9.96, 9.96)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.336 W/kg

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

Reference Value = 11.17 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.384 W/kg

**SAR(1 g) = 0.281 W/kg; SAR(10 g) = 0.200 W/kg**

Maximum value of SAR (measured) = 0.304 W/kg

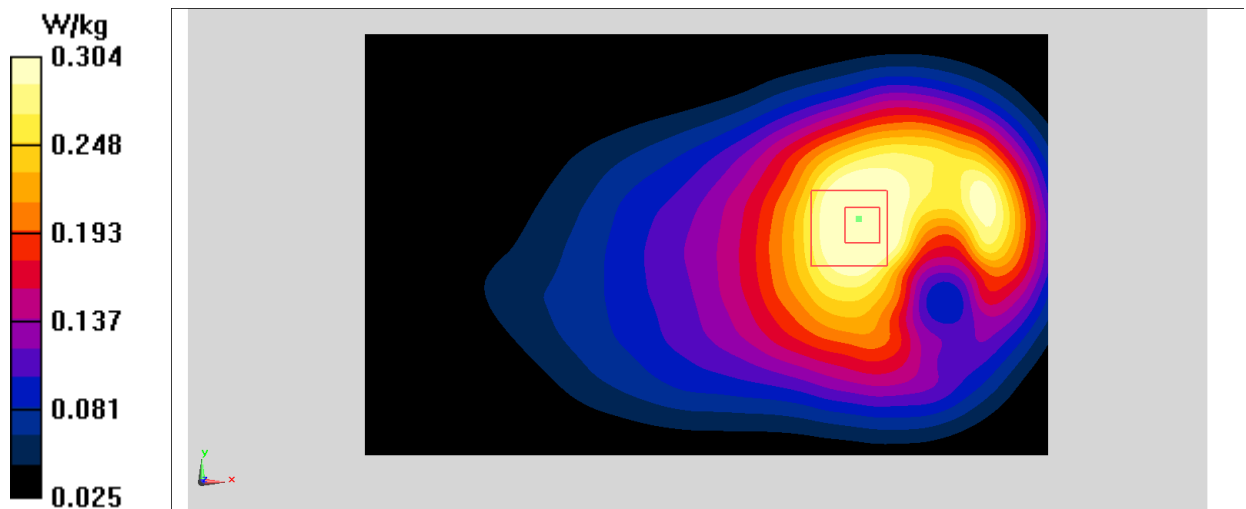


Fig.20 LTE Band12

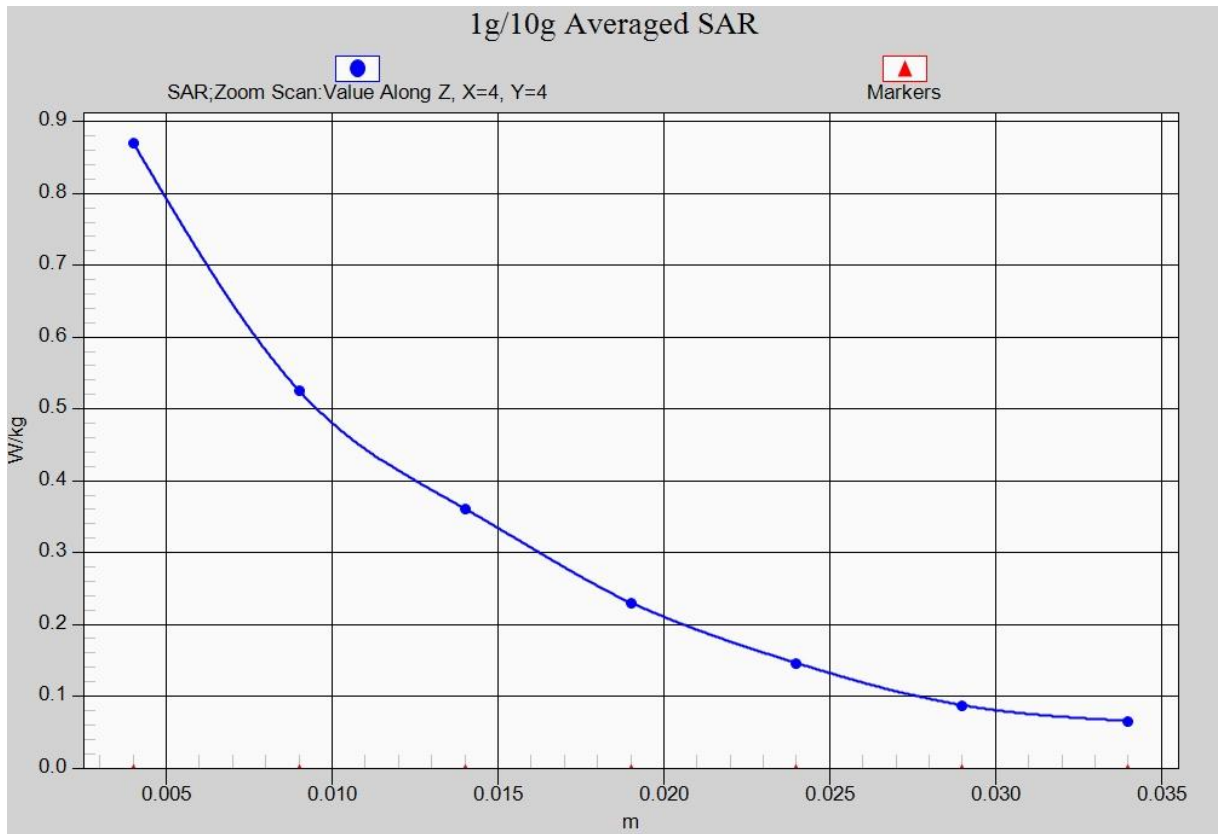


Fig. 20-1 Z-Scan at power reference point (LTE Band12)

### LTE Band13Right Cheek with QPSK\_10M\_1RB\_Low

Date: 2017-8-10

Electronics: DAE4 Sn1331

Medium: Head750 MHz

Medium parameters used (interpolated):  $f = 782$  MHz;  $\sigma = 0.899$  mho/m;  $\epsilon_r = 42.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band13Frequency: 782 MHz Duty Cycle: 1:1

Probe: EX3DV4-SN3846 ConvF(9.65, 9.65, 9.65)

**Area Scan (81x131x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.324 W/kg

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

Reference Value = 4.699 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.420 W/kg

**SAR(1 g) = 0.293 W/kg; SAR(10 g) = 0.229 W/kg**

Maximum value of SAR (measured) = 0.345 W/kg

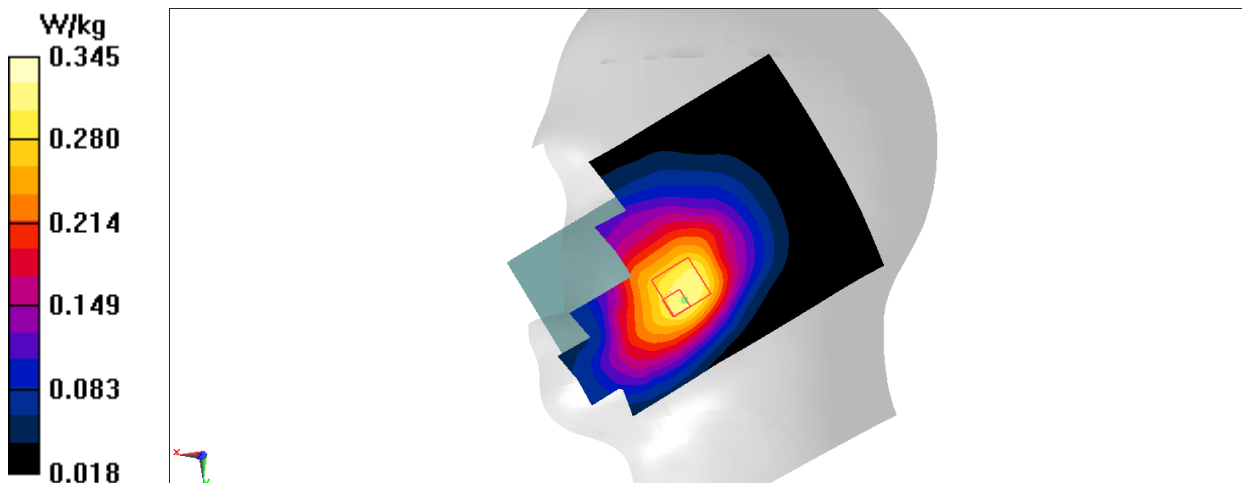


Fig.21 LTE Band13

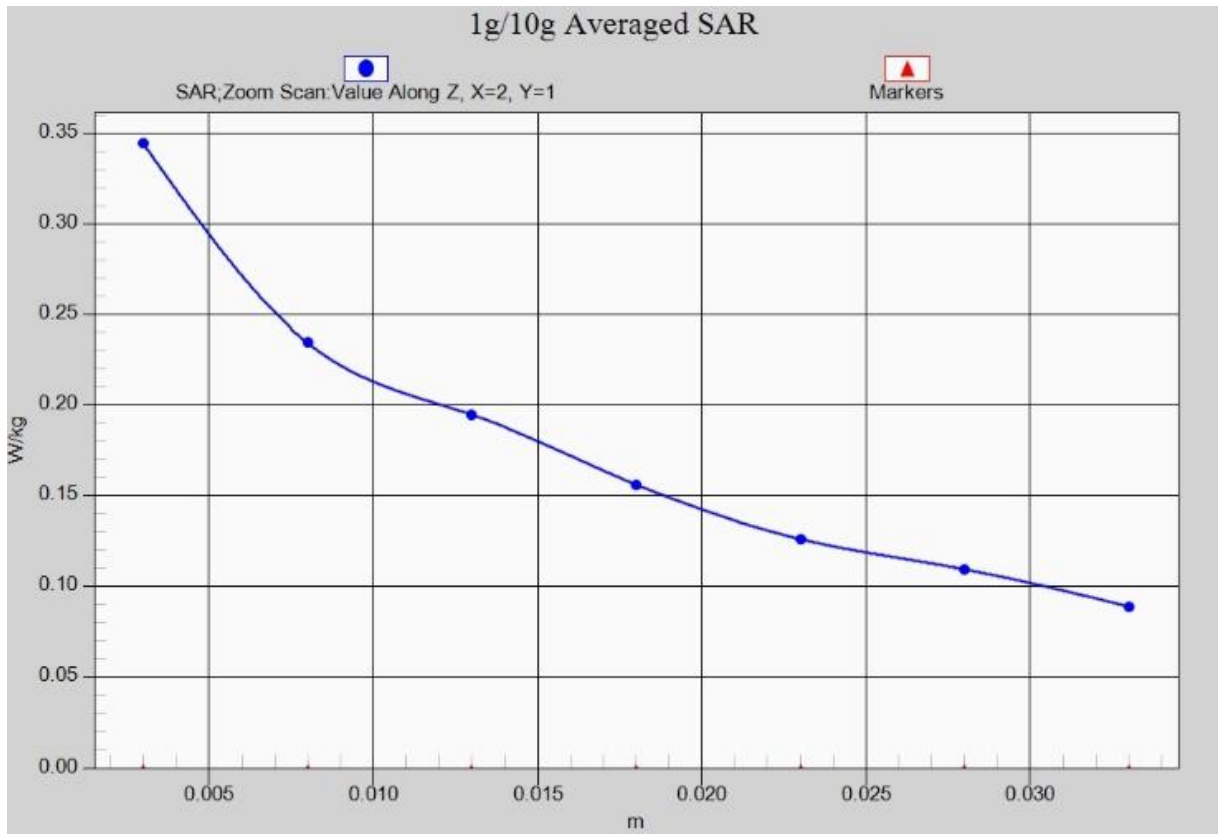


Fig. 21-1 Z-Scan at power reference point (LTE Band13)

### LTE Band13Body Rearwith QPSK\_10M\_1RB\_Low

Date: 2017-8-10

Electronics: DAE4 Sn1331

Medium: Body750 MHz

Medium parameters used (interpolated):  $f = 782$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 56.36$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band13Frequency: 782 MHz Duty Cycle: 1:1

Probe: EX3DV4-SN3846 ConvF(9.96, 9.96, 9.96)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.676 W/kg

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

Reference Value = 15.19 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.800 W/kg

**SAR(1 g) = 0.446 W/kg; SAR(10 g) = 0.284 W/kg**

Maximum value of SAR (measured) = 0.583 W/kg

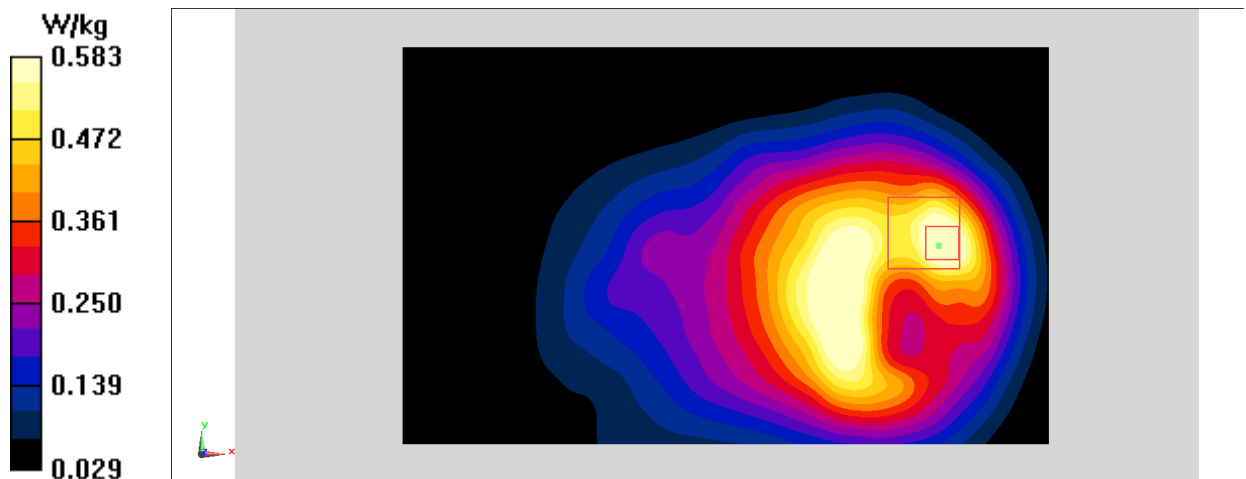


Fig.22 LTE Band13

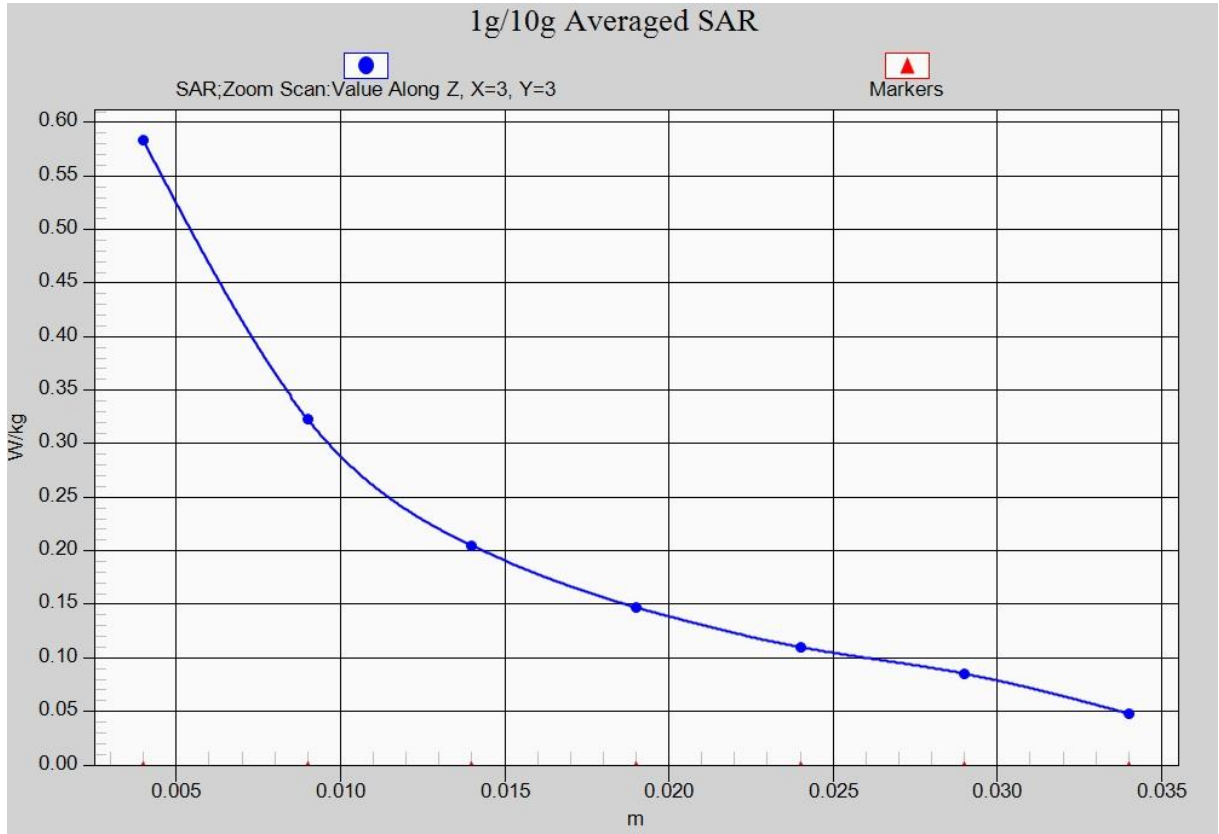


Fig. 22-1 Z-Scan at power reference point (LTE Band13)

### LTE Band30 Right Cheek with QPSK\_10M\_1RB\_High

Date: 2017-8-11

Electronics: DAE4 Sn1331

Medium: Head 2300 MHz

Medium parameters used:  $f = 2310$  MHz;  $\sigma = 1.66$  mho/m;  $\epsilon_r = 39.194$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band30 Frequency: 2310 MHz Duty Cycle: 1:1

Probe: EX3DV4-SN3846 ConvF(7.43, 7.43, 7.43)

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

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

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

Reference Value = 3.282 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.290 W/kg

**SAR(1 g) = 0.165 W/kg; SAR(10 g) = 0.093 W/kg**

Maximum value of SAR (measured) = 0.205 W/kg

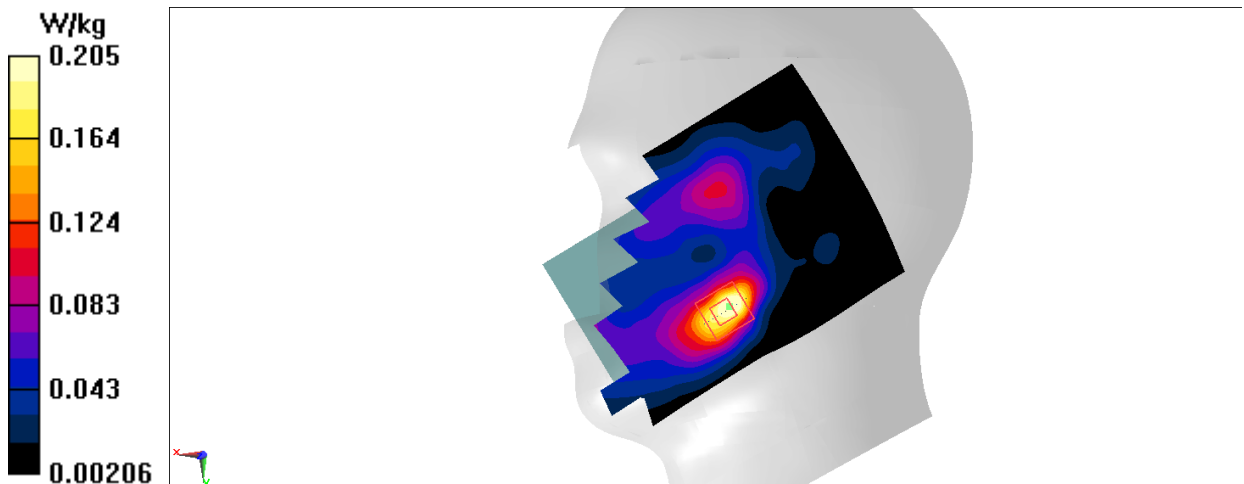


Fig.23 LTE Band30



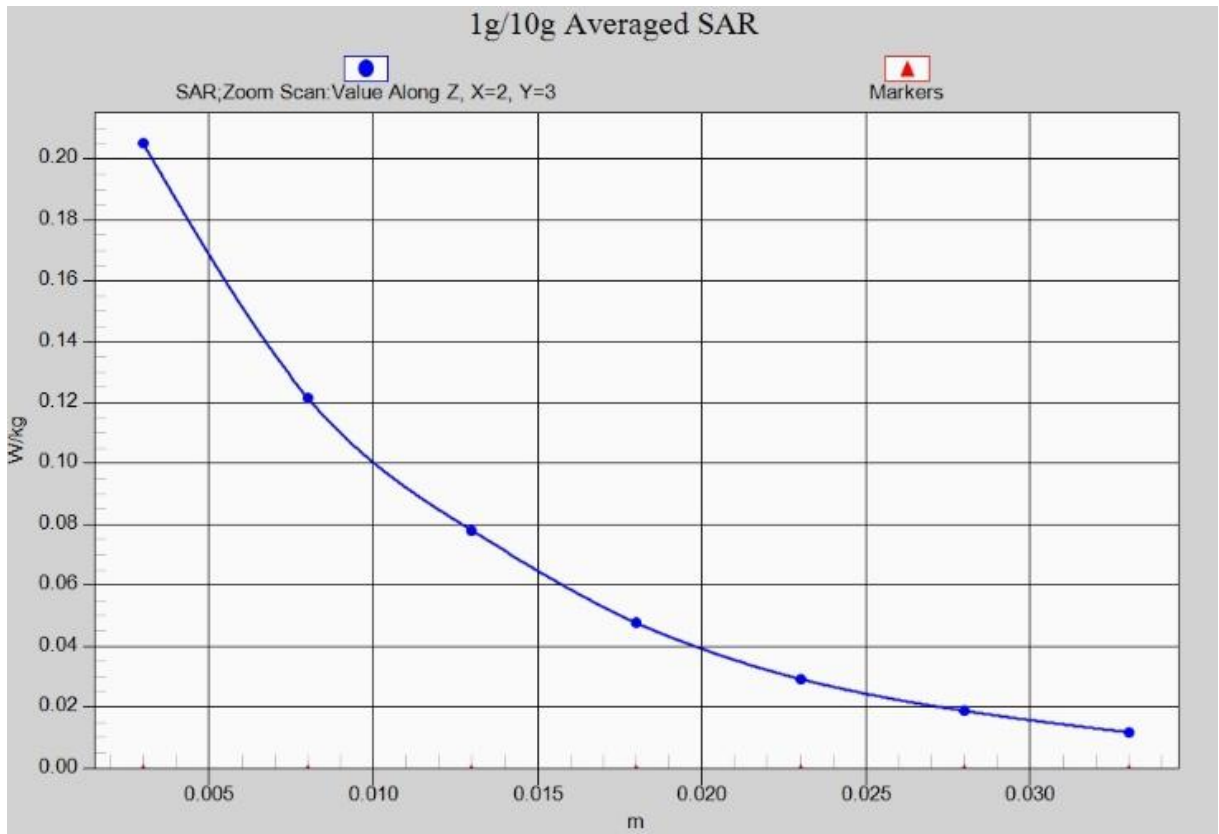


Fig. 23-1 Z-Scan at power reference point (LTE Band30)

### LTE Band30 Body Bottom with QPSK\_10M\_1RB\_High

Date: 2017-8-11

Electronics: DAE4 Sn1331

Medium: Body 2300 MHz

Medium parameters used:  $f = 2310$  MHz;  $\sigma = 1.907$  mho/m;  $\epsilon_r = 52.925$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band30 Frequency: 2310 MHz Duty Cycle: 1:1

Probe: EX3DV4-SN3846 ConvF(7.55, 7.55, 7.55)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.03 W/kg

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

Reference Value = 17.97 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.44 W/kg

**SAR(1 g) = 0.796 W/kg; SAR(10 g) = 0.446 W/kg**

Maximum value of SAR (measured) = 0.870 W/kg

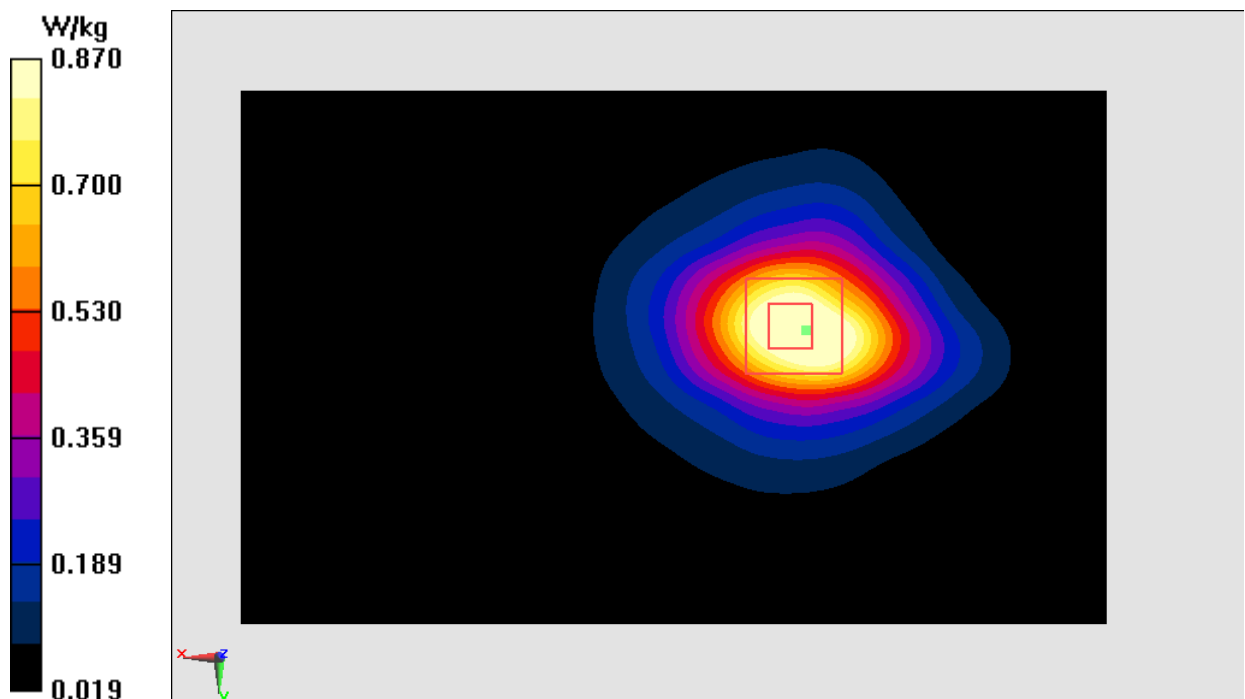


Fig.24 LTE Band30

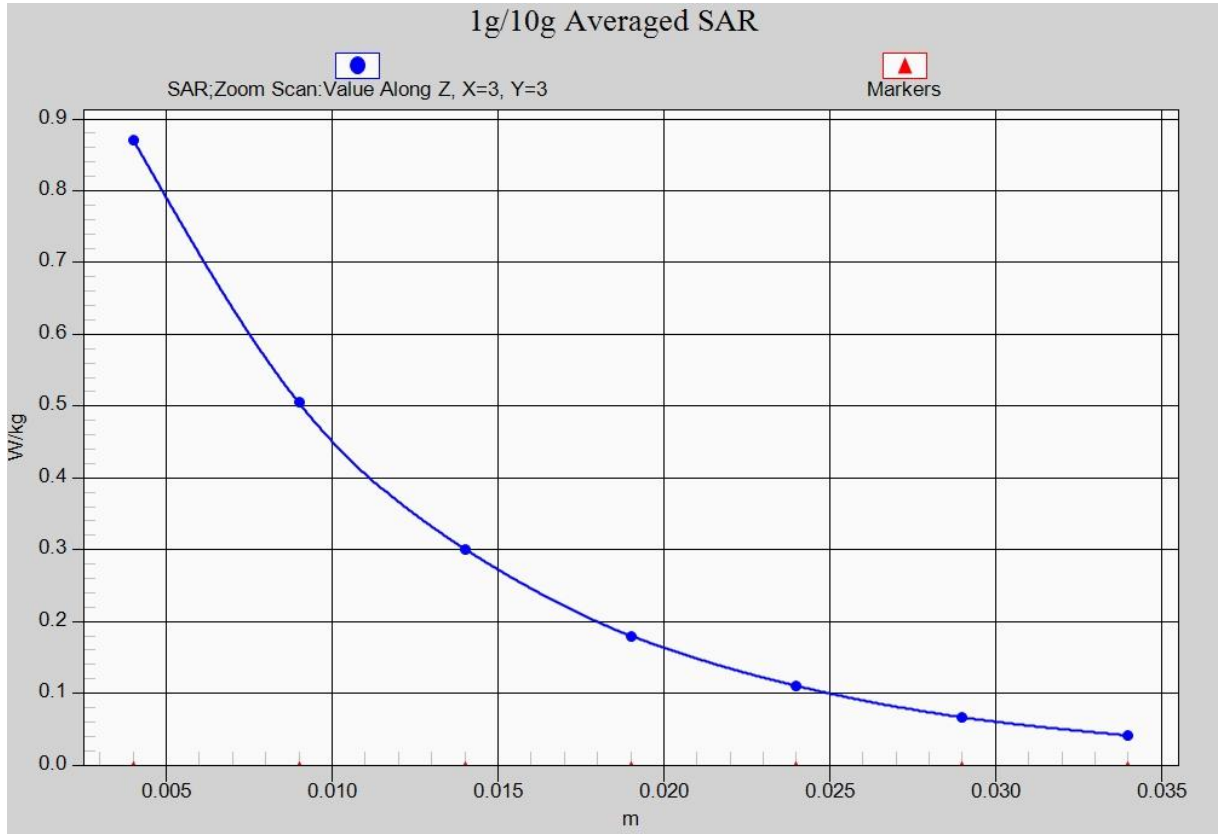


Fig. 24-1 Z-Scan at power reference point (LTE Band30)

### LTE Band38 Right Cheek High with QPSK\_20M\_1RB\_Middle

Date: 2017-8-12

Electronics: DAE4 Sn1331

Medium: Head 2600 MHz

Medium parameters used:  $f = 2610$  MHz;  $\sigma = 1.962$  mho/m;  $\epsilon_r = 38.41$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band38 Frequency: 2610 MHz Duty Cycle: 1:1.58

Probe: EX3DV4– SN3846 ConvF(7.12, 7.12,7.12)

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

Maximum value of SAR (interpolated) = 0.113 W/kg

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

Reference Value = 1.404 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.155 W/kg

**SAR(1 g) = 0.083 W/kg; SAR(10 g) = 0.044 W/kg**

Maximum value of SAR (measured) = 0.105 W/kg

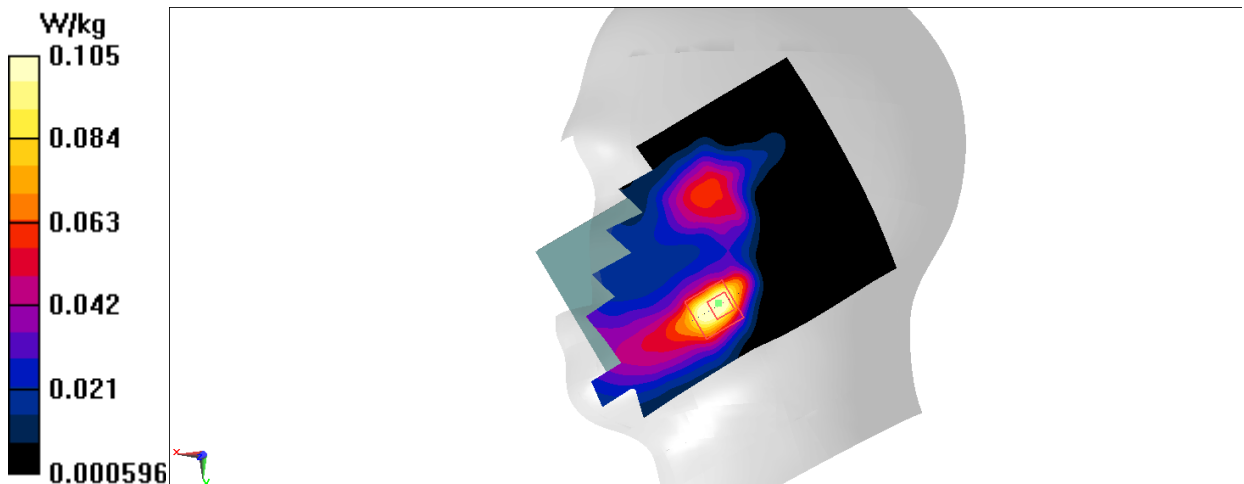


Fig.25 LTE Band38

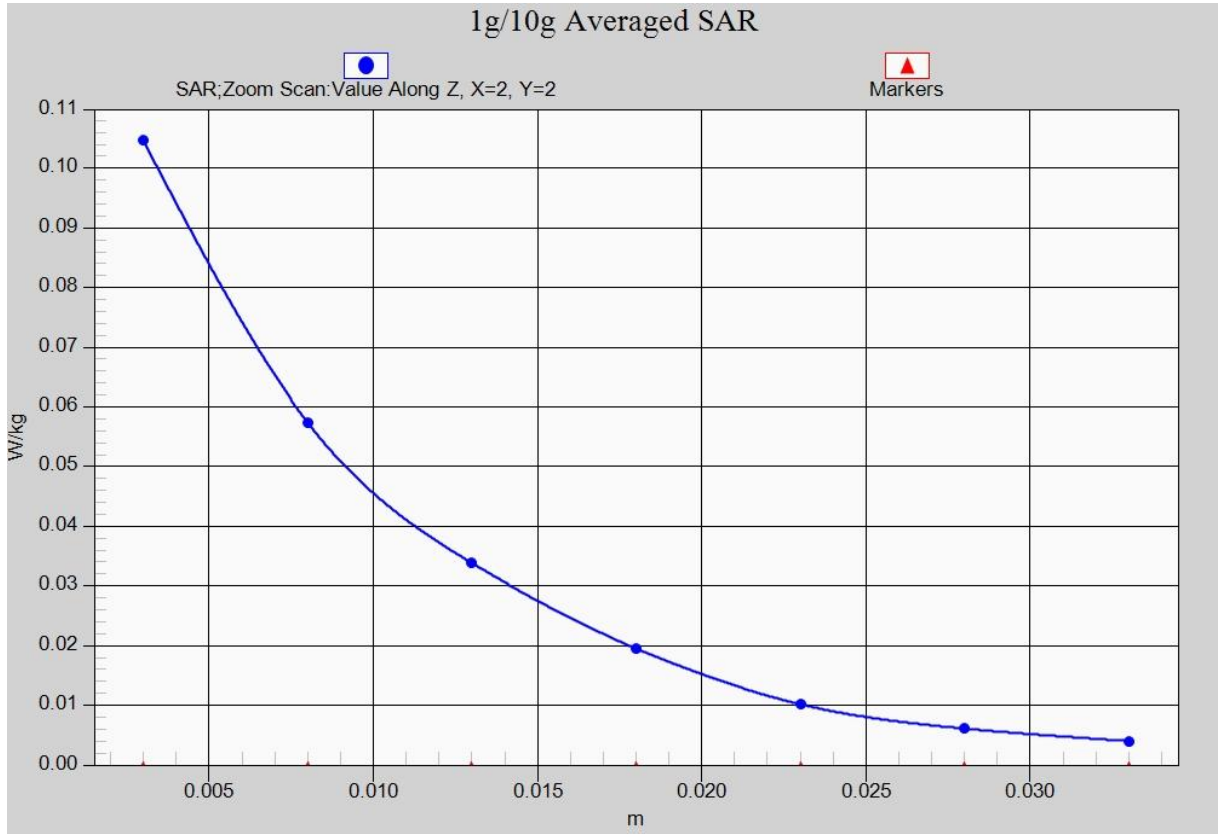


Fig. 25-1 Z-Scan at power reference point (LTE Band38)

### LTE Band38 Body Bottom High with QPSK\_20M\_1RB\_Middle

Date: 2017-8-12

Electronics: DAE4 Sn1331

Medium: Body 2600 MHz

Medium parameters used:  $f = 2610$  MHz;  $\sigma = 2.161$  mho/m;  $\epsilon_r = 51.663$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band38 Frequency: 2610 MHz Duty Cycle: 1:1.58

Probe: EX3DV4– SN3846 ConvF(7.25, 7.25, 7.25)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.862 W/kg

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

Reference Value = 18.46 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.24 W/kg

**SAR(1 g) = 0.672 W/kg; SAR(10 g) = 0.345 W/kg**

Maximum value of SAR (measured) = 0.760 W/kg

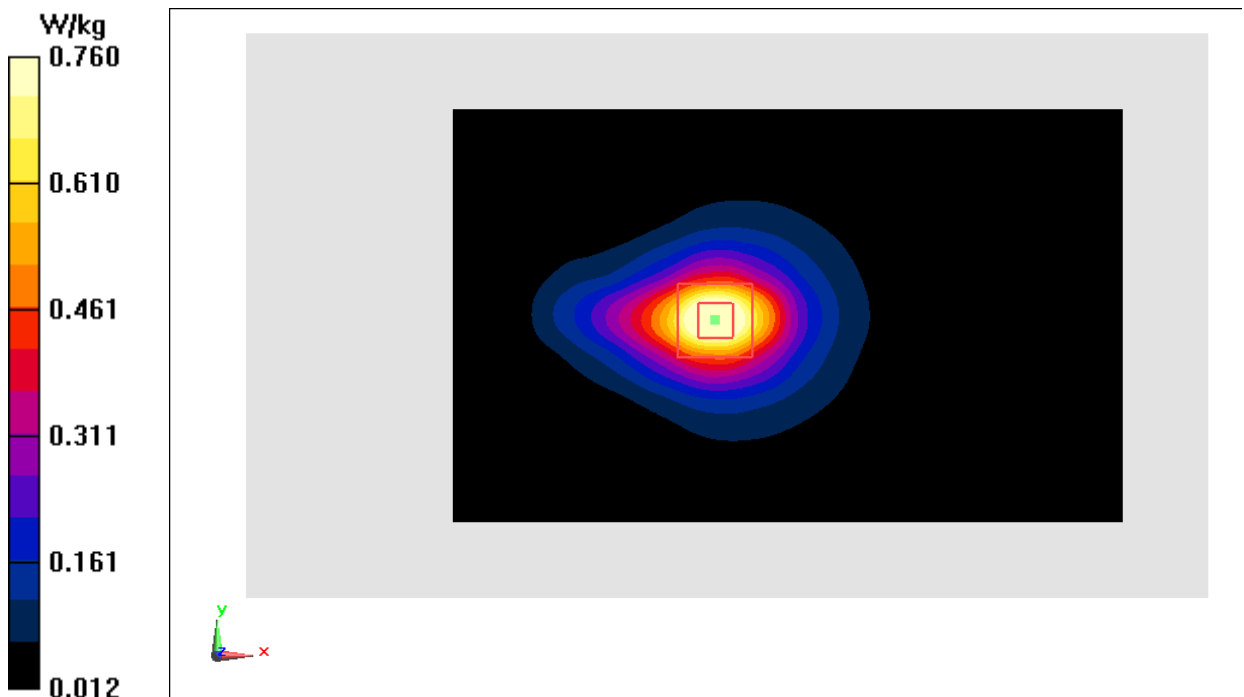


Fig.26 LTE Band38

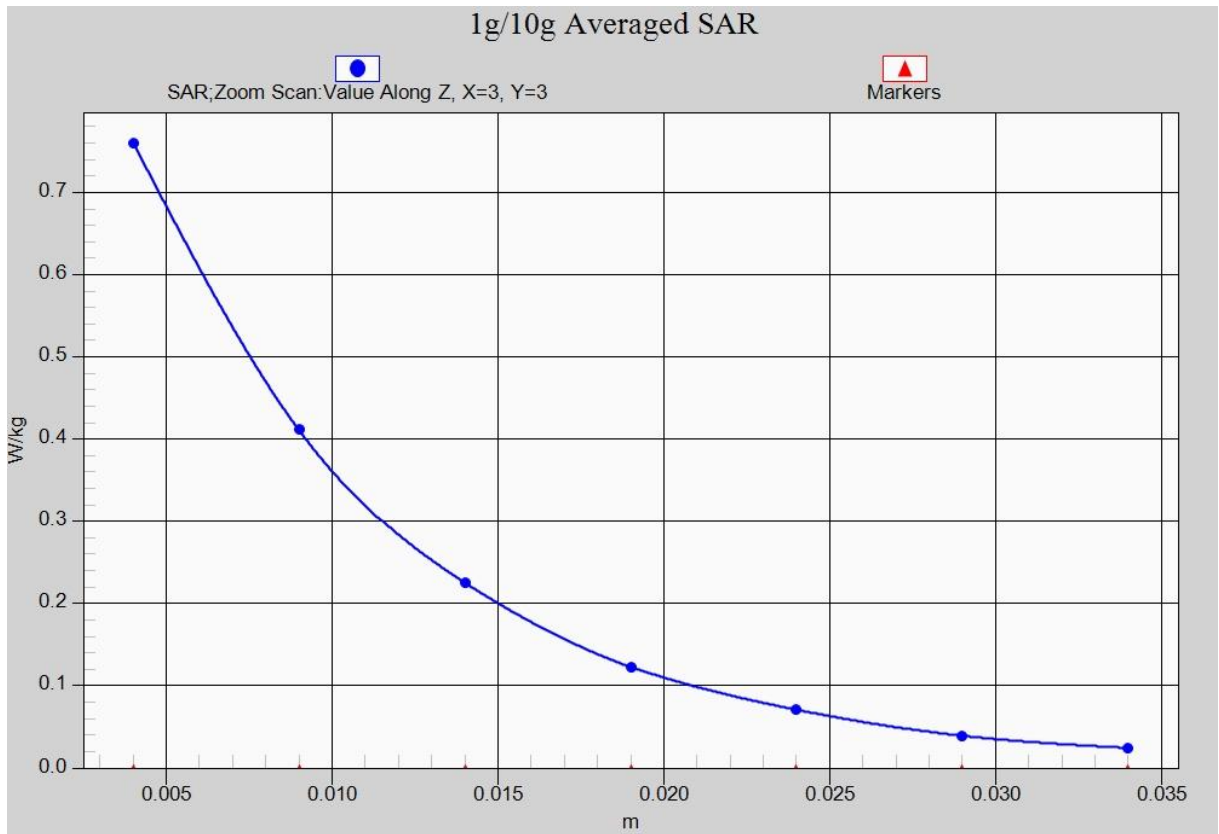


Fig. 26-1 Z-Scan at power reference point (LTE Band38)

### LTE Band 41Right Cheek High with QPSK\_20M\_1RB\_High

Date: 2017-8-12

Electronics: DAE4 Sn1331

Medium: Head2600 MHz

Medium parameters used:  $f = 2680$  MHz;  $\sigma = 2.029$  mho/m;  $\epsilon_r = 38.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band41Frequency: 2680 MHz Duty Cycle: 1:1.58

Probe: EX3DV4 - SN3846 ConvF(7.12, 7.12,7.12)

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

Maximum value of SAR (interpolated) = 0.102 W/kg

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

Reference Value = 1.457 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.153 W/kg

**SAR(1 g) = 0.080 W/kg; SAR(10 g) = 0.041 W/kg**

Maximum value of SAR (measured) = 0.0985 W/kg

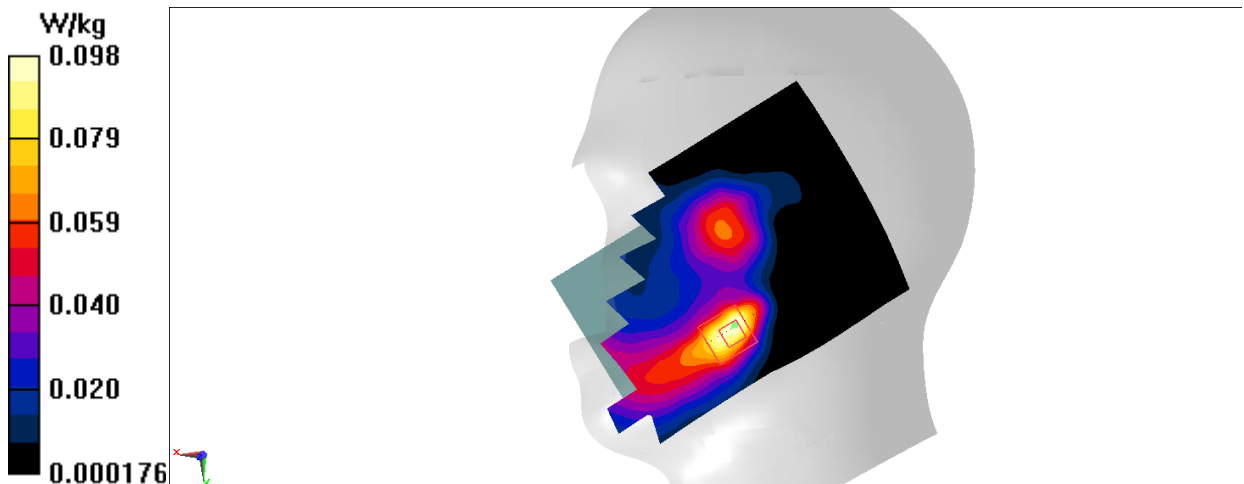


Fig.27 LTE Band 41



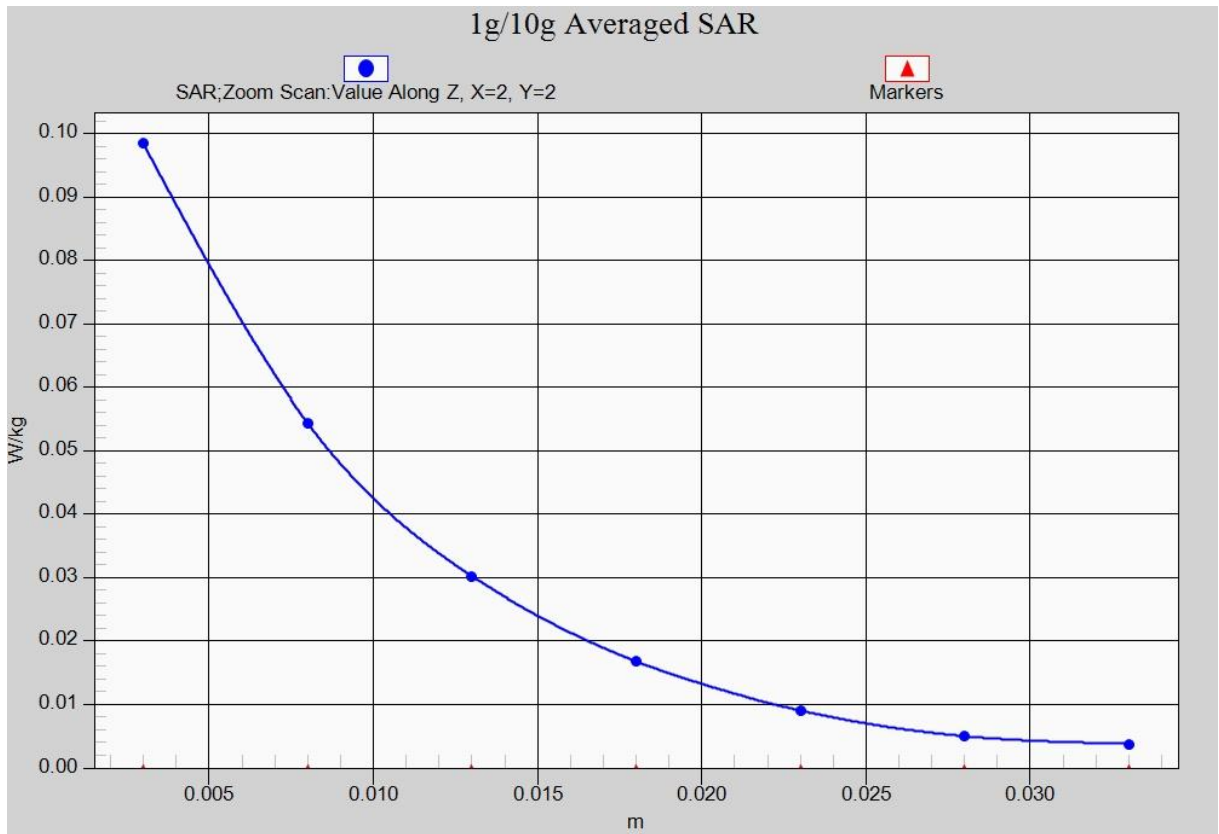


Fig. 27-1 Z-Scan at power reference point (LTE Band 41)

### LTE Band 41 Body Bottom Low with QPSK\_20M\_1RB\_High

Date: 2017-8-12

Electronics: DAE4 Sn1331

Medium: Body2600 MHz

Medium parameters use (interpolated):  $f = 2506$  MHz;  $\sigma = 2.013$  mho/m;  $\epsilon_r = 52.139$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band41 Frequency: 2506 MHz Duty Cycle: 1:1.58

Probe: EX3DV4 - SN3846 ConvF(7.25, 7.25, 7.25)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.08 W/kg

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

Reference Value = 17.74 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.55 W/kg

**SAR(1 g) = 0.853 W/kg; SAR(10 g) = 0.443 W/kg**

Maximum value of SAR (measured) = 0.957 W/kg

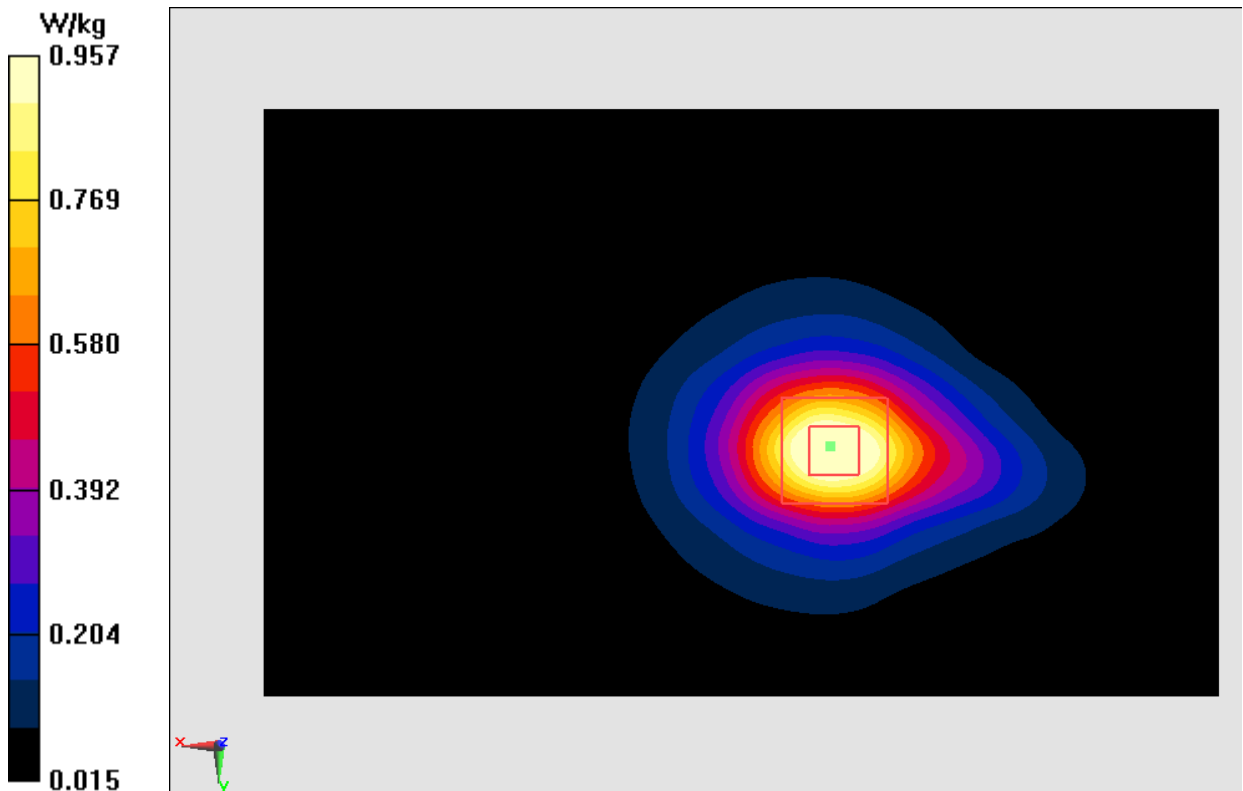


Fig.28 LTE Band 41

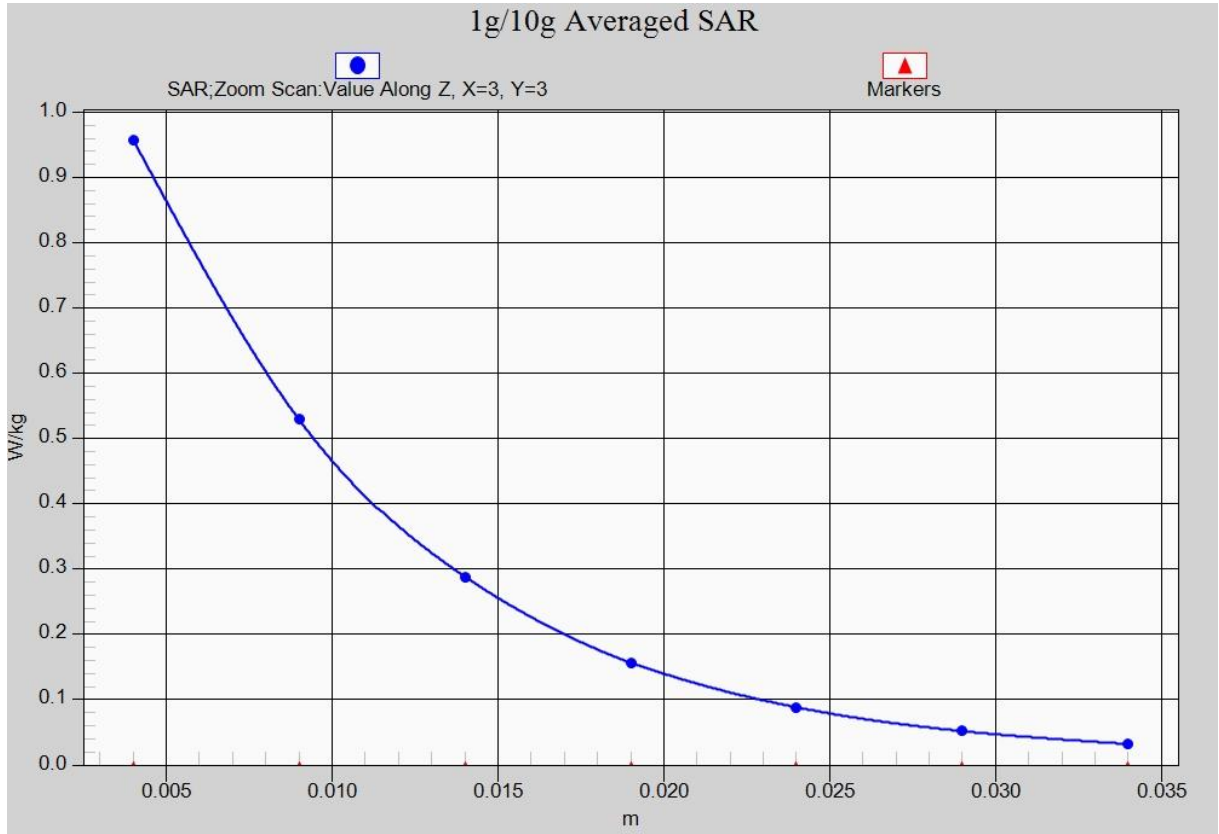


Fig. 28-1 Z-Scan at power reference point (LTE Band 41)

### LTE Band66 Left Cheek Low with QPSK\_20M\_1RB\_Low

Date: 2017-8-13

Electronics: DAE4 Sn1331

Medium: Head 1750 MHz

Medium parameters used  $f = 1720$  MHz;  $\sigma = 1.398$  mho/m;  $\epsilon_r = 40.485$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band66 Frequency: 1720MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN3846ConvF(8.16, 8.16, 8.16)

**Area Scan (71x121x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.343 W/kg

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

Reference Value = 5.433 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.402 W/kg

**SAR(1 g) = 0.287 W/kg; SAR(10 g) = 0.194 W/kg**

Maximum value of SAR (measured) = 0.330 W/kg

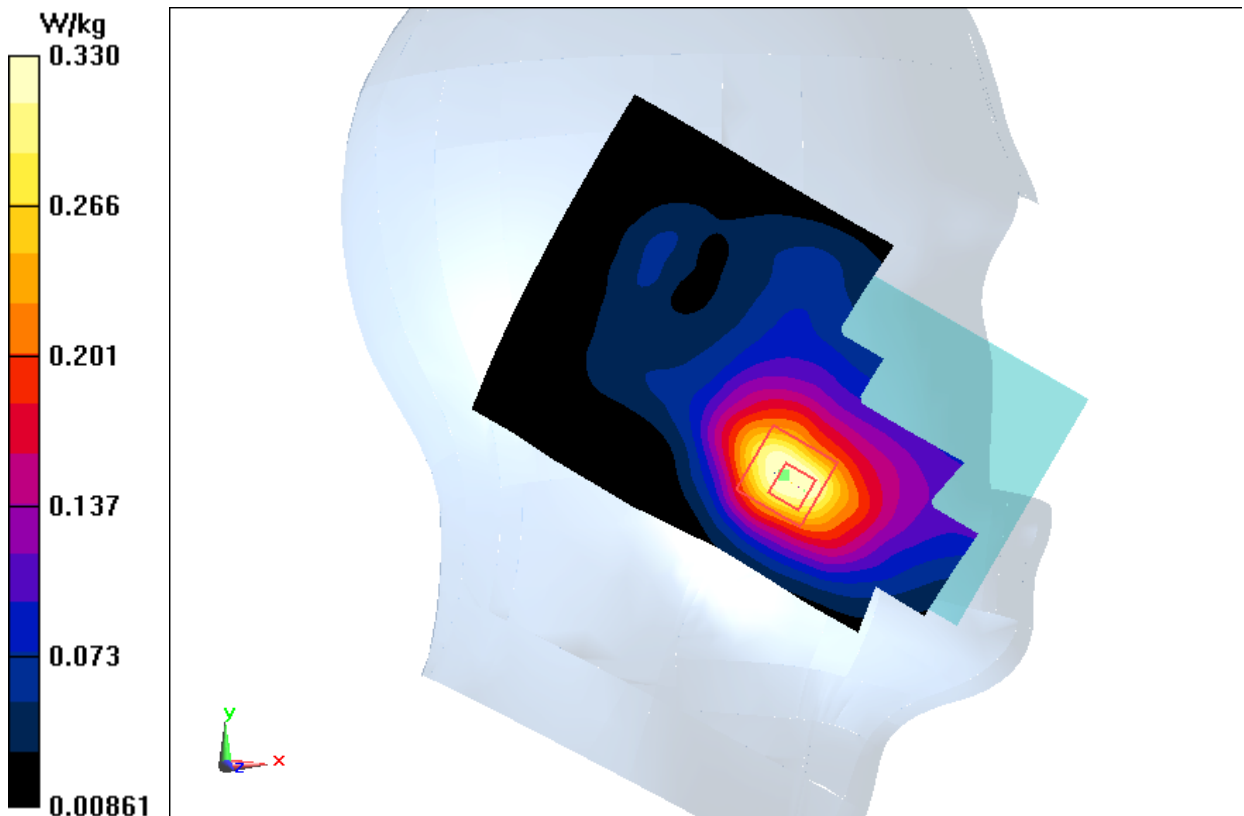


Fig.29 LTE Band66

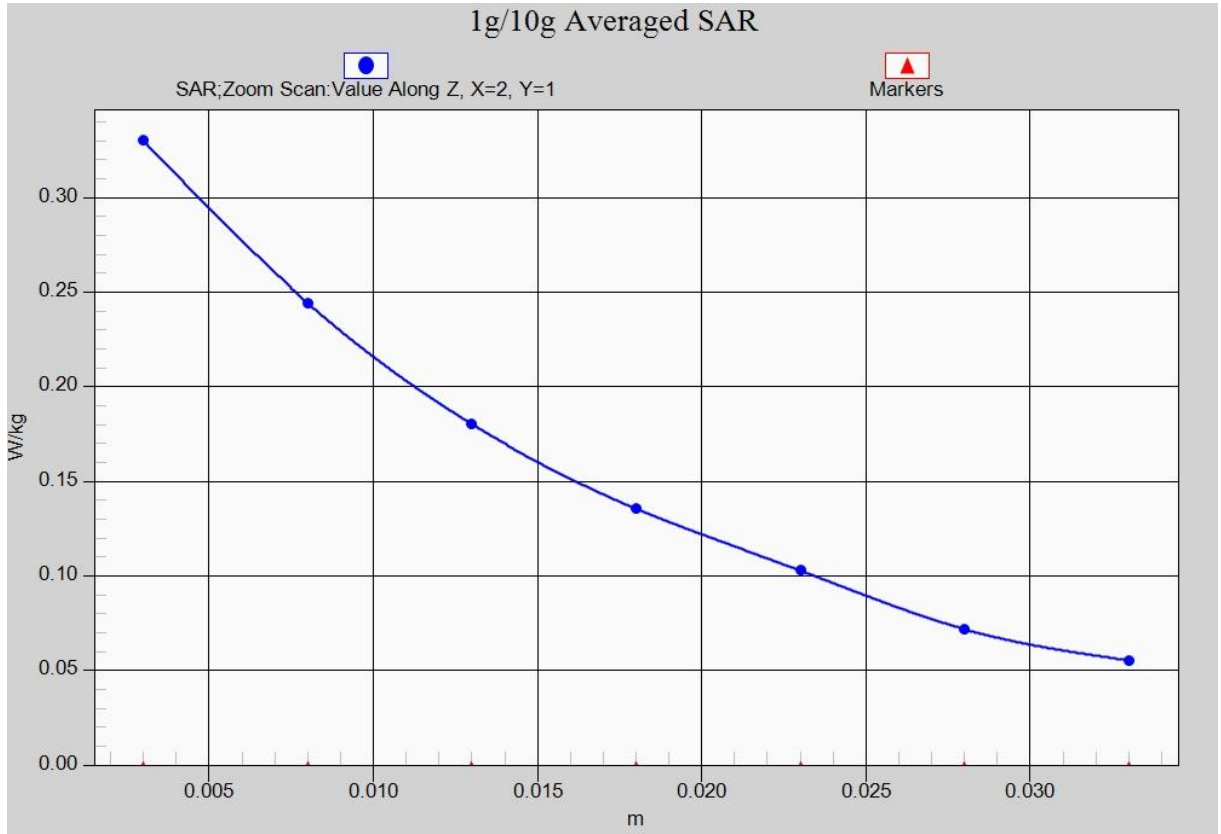


Fig. 29-1 Z-Scan at power reference point (LTE Band66)

### LTE Band66 Body Front High with QPSK\_20M\_1RB\_Low- 10mm

Date: 2017-8-13

Electronics: DAE4 Sn1331

Medium: Body 1750 MHz

Medium parameters used:  $f = 1770$  MHz;  $\sigma = 1.54$  mho/m;  $\epsilon_r = 53.544$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band66 Frequency: 1770 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN3846 ConvF(7.90, 7.90, 7.90)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.17 W/kg

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

Reference Value = 8.668 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.47 W/kg

**SAR(1 g) = 0.921 W/kg; SAR(10 g) = 0.543 W/kg**

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

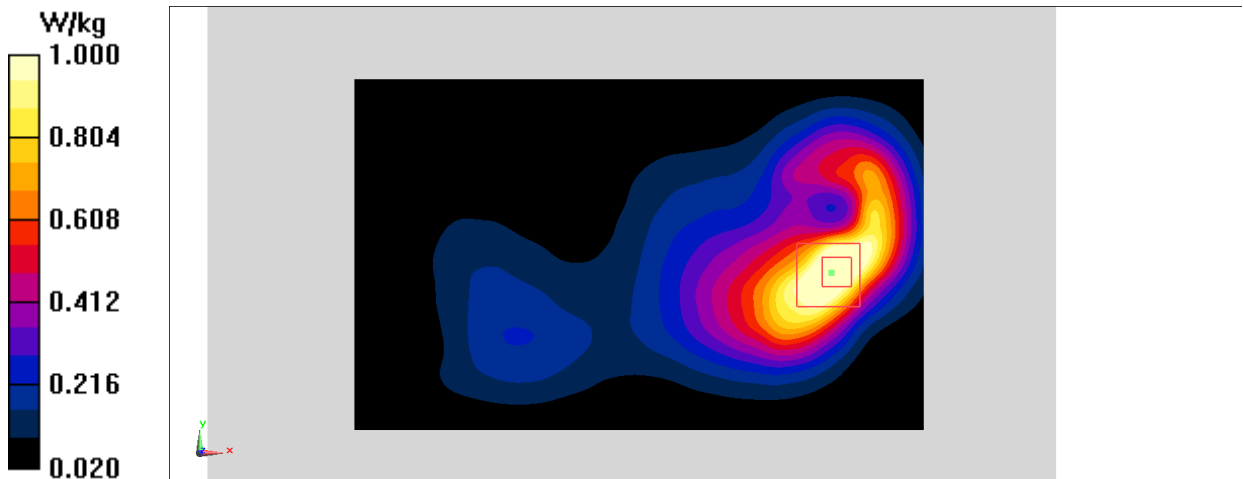


Fig.30 LTE Band66

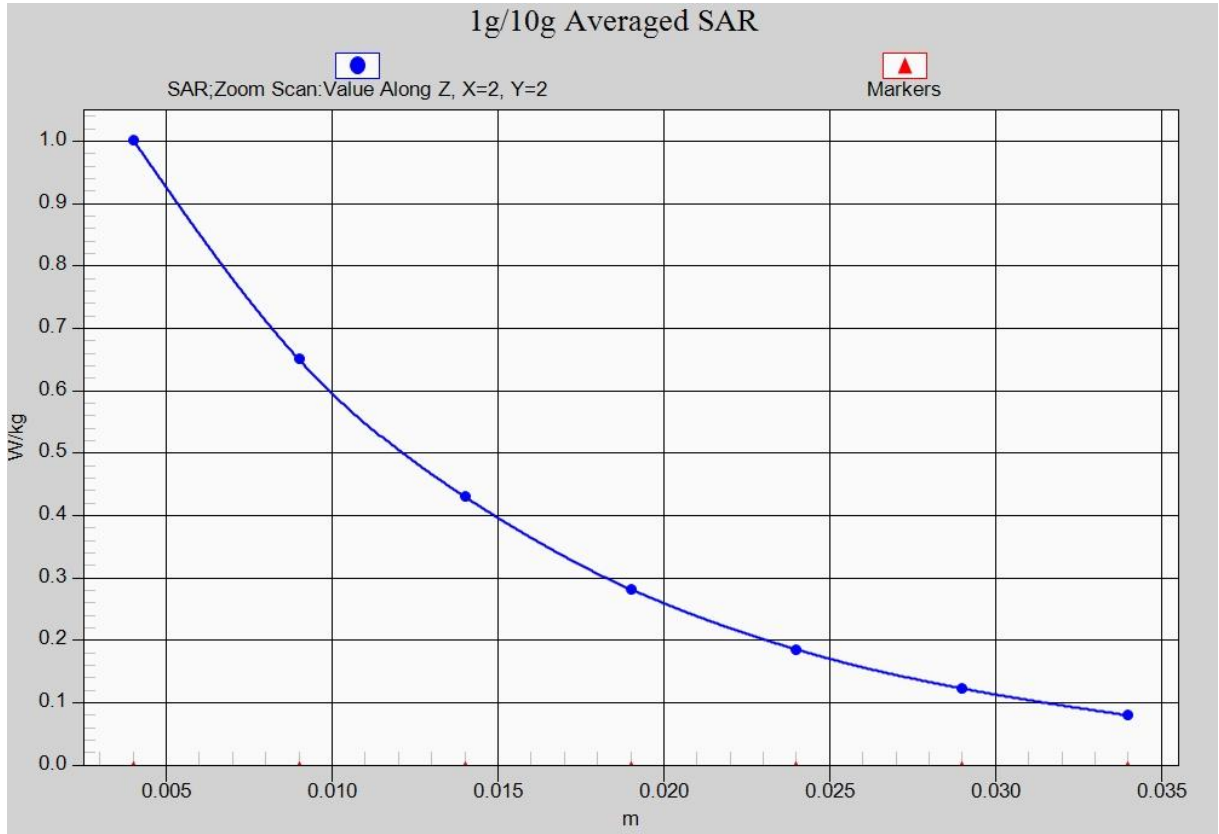


Fig. 30-1 Z-Scan at power reference point (LTE Band66)

**LTE Band66 Body FrontLow with QPSK\_20M\_1RB\_Low– 15mm**

Date: 2017-8-13

Electronics: DAE4 Sn1331

Medium: Body 1750 MHz

Medium parameters used:  $f = 1720$  MHz;  $\sigma = 1.502$  mho/m;  $\epsilon_r = 53.714$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: LTE Band66 Frequency: 1720 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN3846 ConvF(7.90, 7.90, 7.90)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.03 W/kg

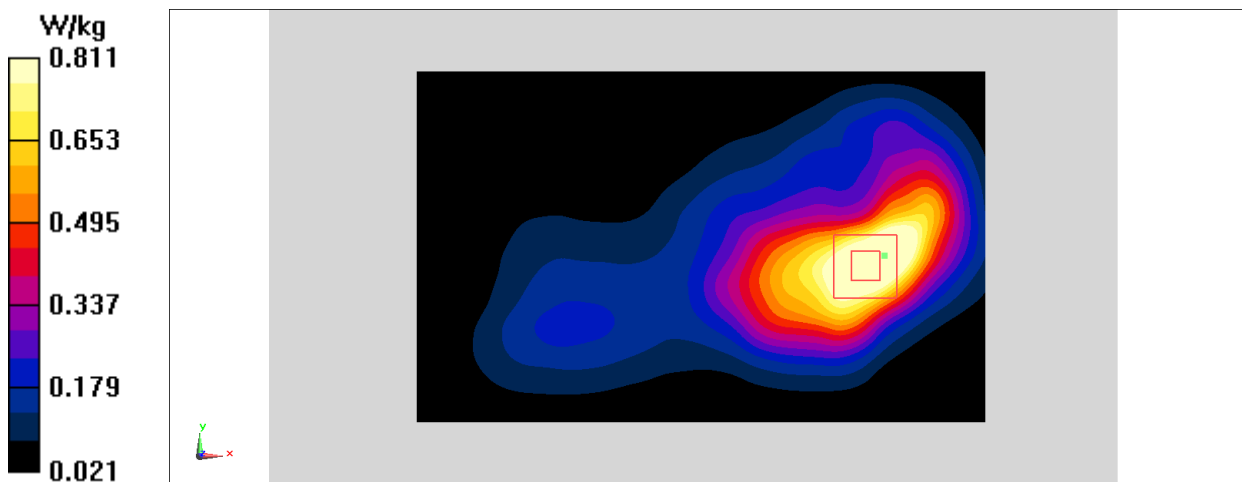
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.993 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.12 W/kg

**SAR(1 g) = 0.749 W/kg; SAR(10 g) = 0.476 W/kg**

Maximum value of SAR (measured) = 0.811 W/kg



**Fig.31 LTE Band66**



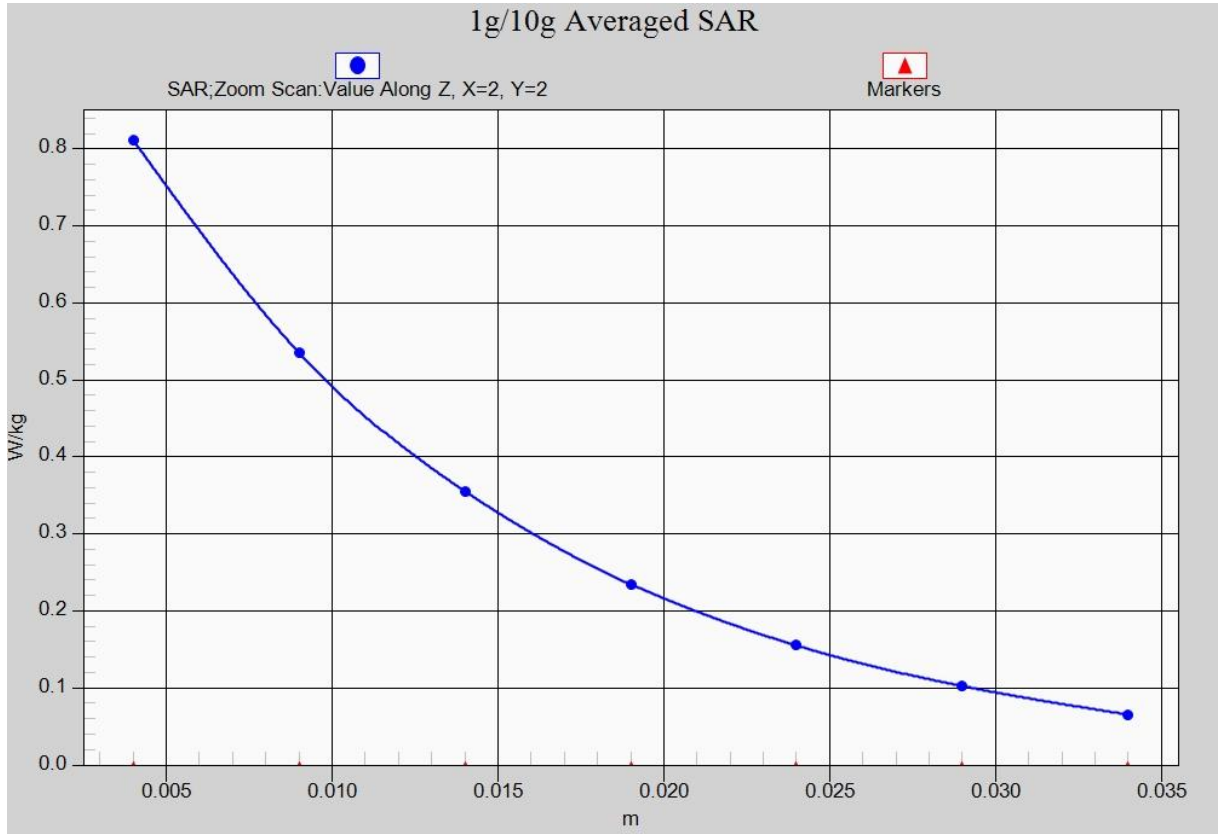


Fig. 31-1 Z-Scan at power reference point (LTE Band66)

### Wifi 802.11bLeftTiltChannel 6

Date: 2017-8-14

Electronics: DAE4 Sn1331

Medium: Head 2450 MHz

Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.799$  mho/m;  $\epsilon_r = 38.97$ ;  $\rho = 1000$  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-SN3846 ConvF(7.22, 7.22, 7.22)

**Area Scan (91x151x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.47 W/kg

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

Reference Value = 13.08 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 2.38 W/kg

**SAR(1 g) = 1.06 W/kg; SAR(10 g) = 0.435 W/kg**

Maximum value of SAR (measured) = 1.46 W/kg

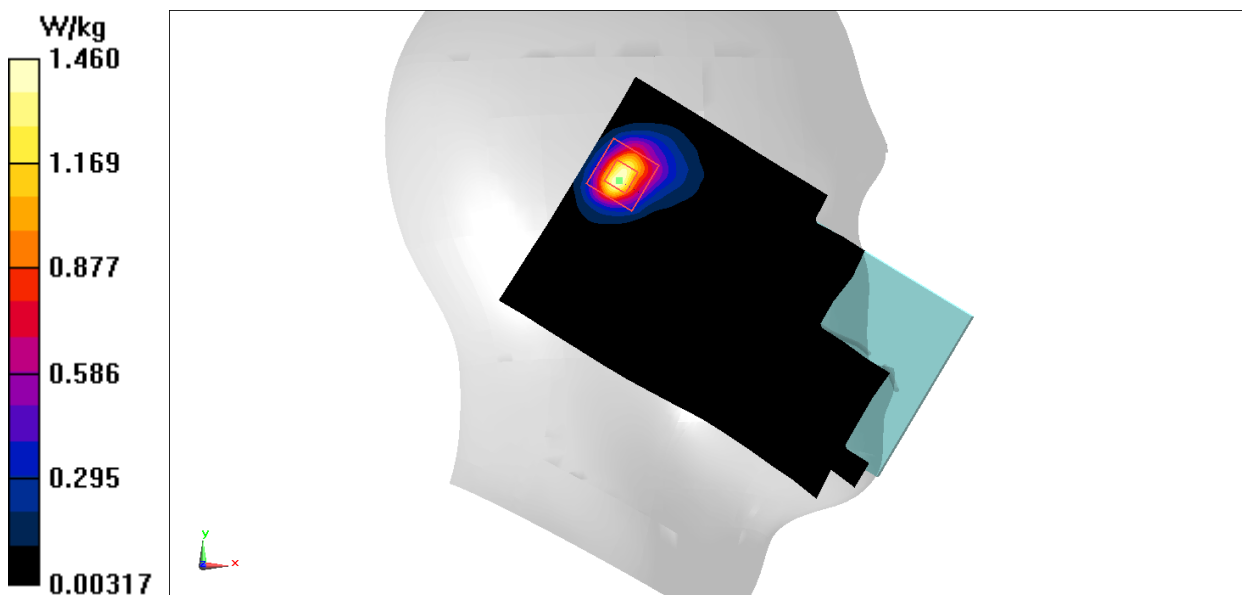


Fig.322450 MHz

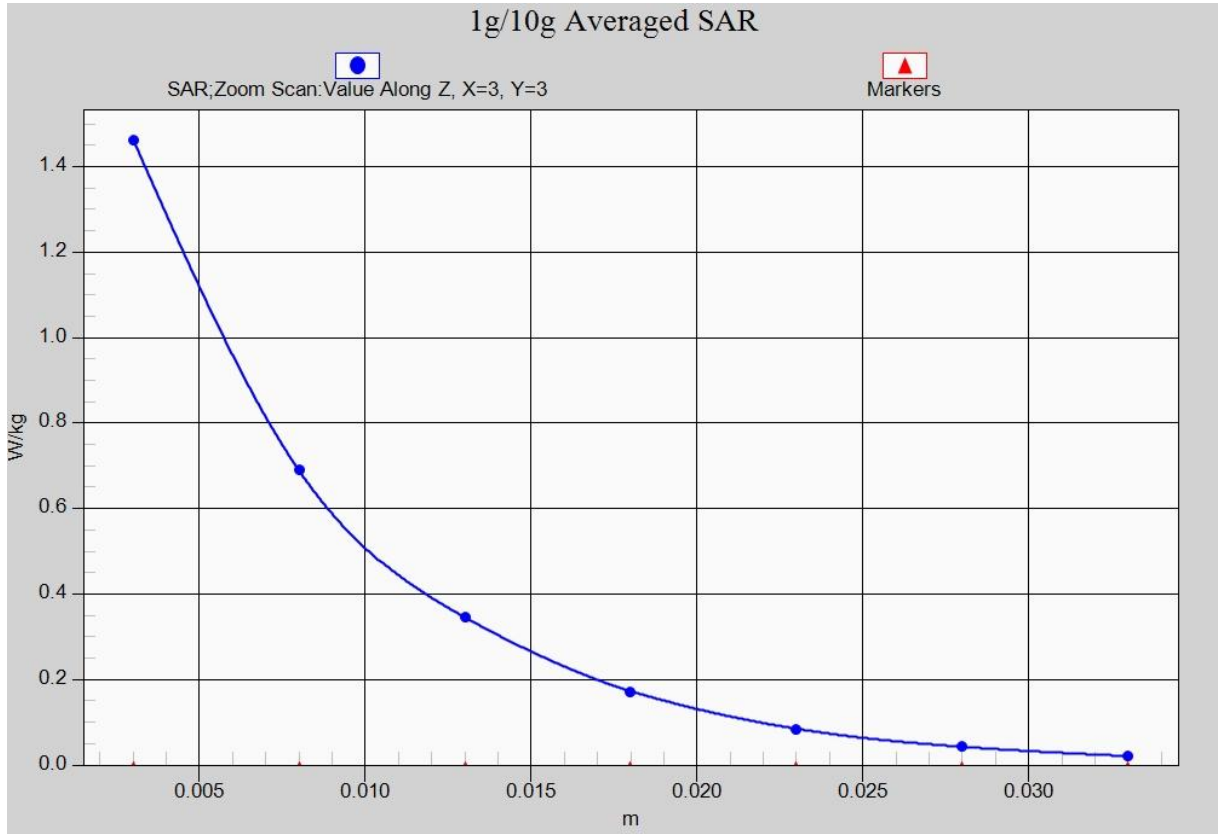


Fig. 32-1 Z-Scan at power reference point (2450 MHz)

### Wifi 802.11b Body TopChannel 6

Date: 2017-8-14

Electronics: DAE4 Sn1331

Medium: Body 2450 MHz

Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.966$  mho/m;  $\epsilon_r = 52.12$ ;  $\rho = 1000$  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 -SN3846 ConvF(7.31, 7.31, 7.31)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.664 W/kg

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

Reference Value = 10.14 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.840 W/kg

**SAR(1 g) = 0.463 W/kg; SAR(10 g) = 0.228 W/kg**

Maximum value of SAR (measured) = 0.528 W/kg

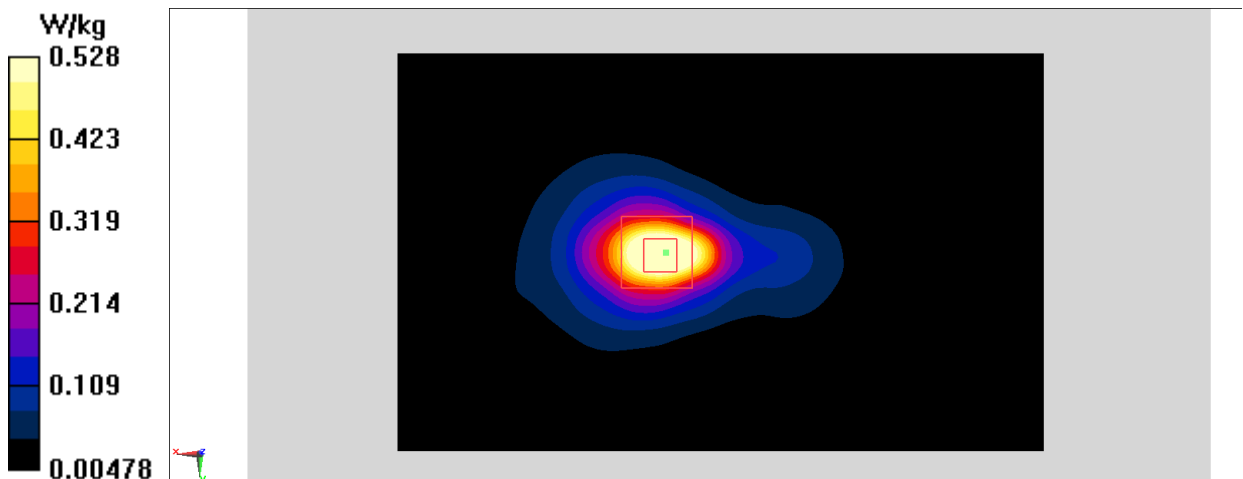


Fig.332450 MHz

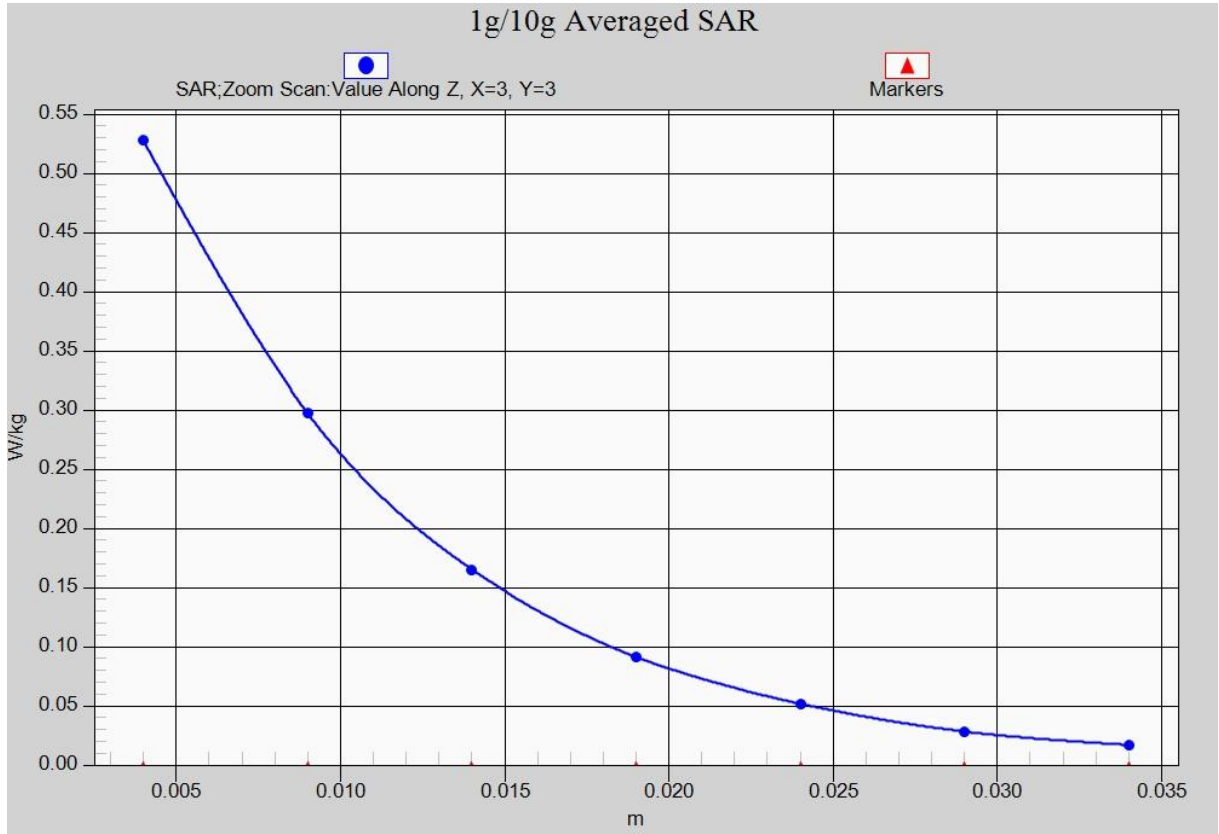


Fig. 33-1 Z-Scan at power reference point (2450 MHz)

### Wifi 802.11aRightTiltChannel 120

Date: 2017-8-15

Electronics: DAE4 Sn1331

Medium: Head 5 GHz

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.06$  mho/m;  $\epsilon_r = 35.297$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: WLAN 5G Frequency: 5600 MHz Duty Cycle: 1:1

Probe: EX3DV4-SN3846 ConvF(4.72, 4.72, 4.72)

**Area Scan (111x171x1):** 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=4mm, dy=4mm, dz=1.4mm

Reference Value = 8.023 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 3.48 W/kg

**SAR(1 g) = 0.796 W/kg; SAR(10 g) = 0.225 W/kg**

Maximum value of SAR (measured) = 1.96 W/kg

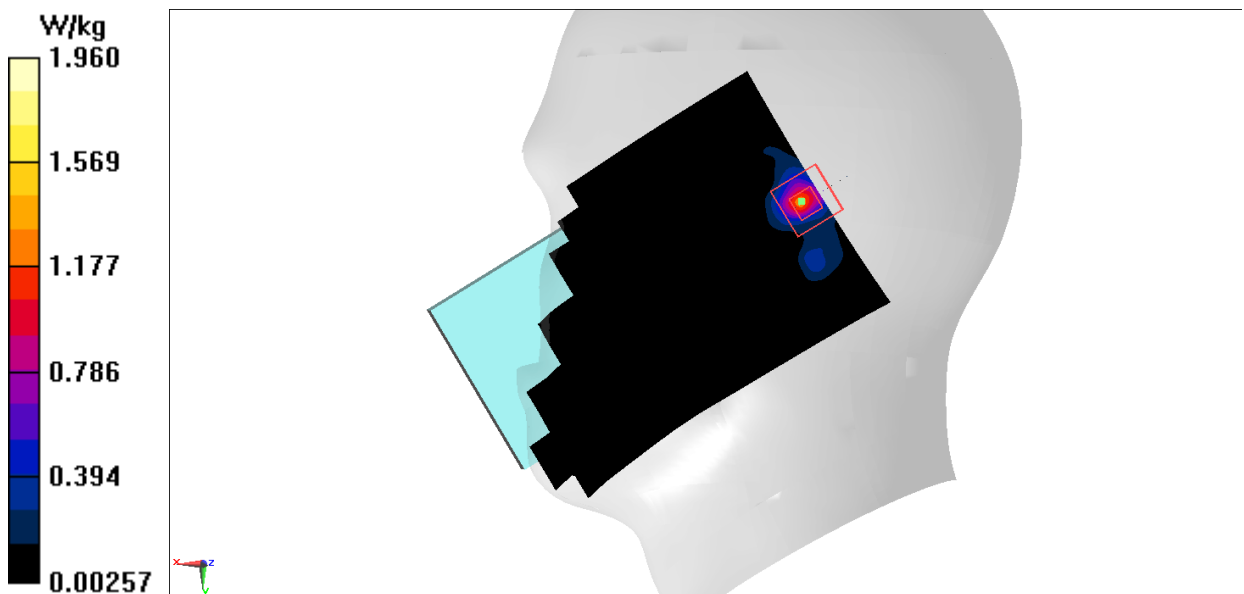


Fig.345GHz

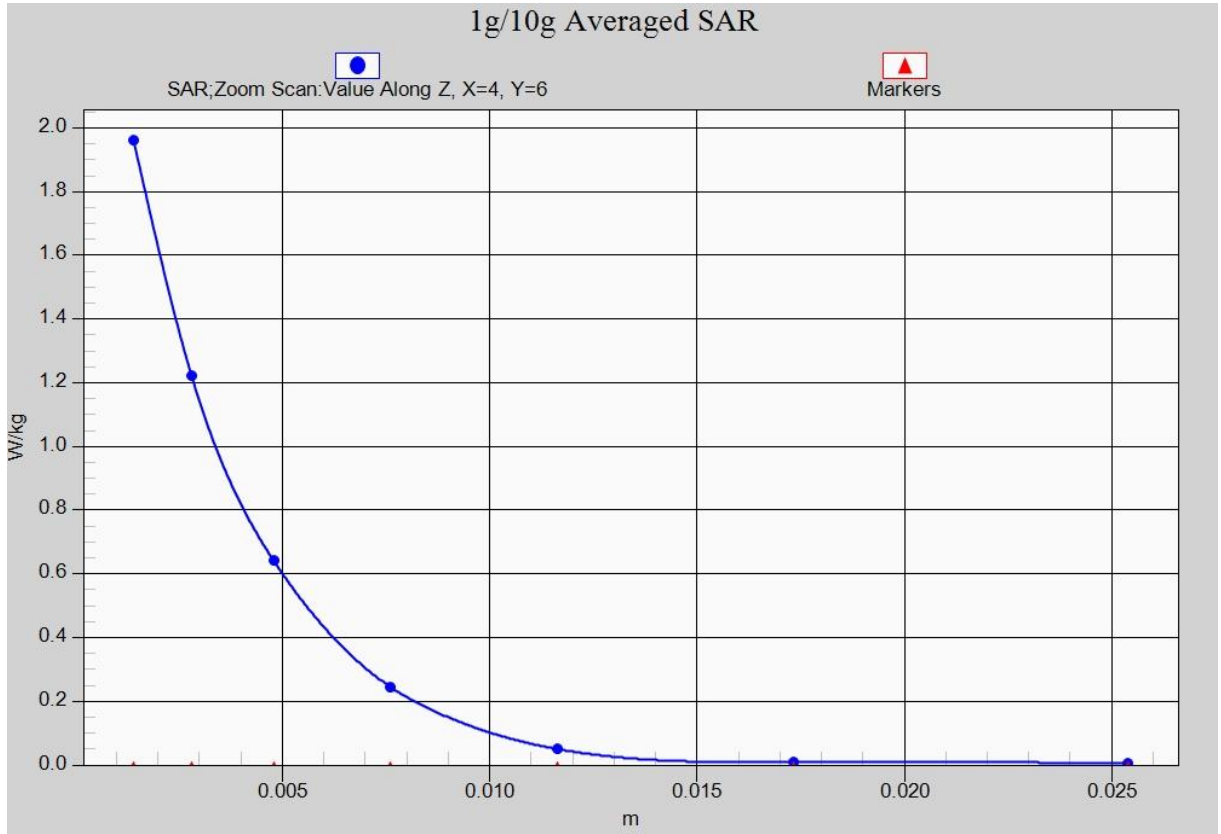


Fig. 34-1 Z-Scan at power reference point (5GHz)

### Wifi 802.11aTopChannel 120

Date: 2017-8-15

Electronics: DAE4 Sn1331

Medium: Body5 GHz

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.709$  mho/m;  $\epsilon_r = 46.843$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

Communication System: WLan 5G Frequency: 5600 MHz Duty Cycle: 1:1

Probe: EX3DV4-SN3846 ConvF(4.18, 4.18, 4.18)

**Area Scan (181x101x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.272 W/kg

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 3.210 V/m; Power Drift = 0.39 dB

Peak SAR (extrapolated) = 0.475 W/kg

**SAR(1 g) = 0.132 W/kg; SAR(10 g) = 0.045 W/kg**

Maximum value of SAR (measured) = 0.308 W/kg

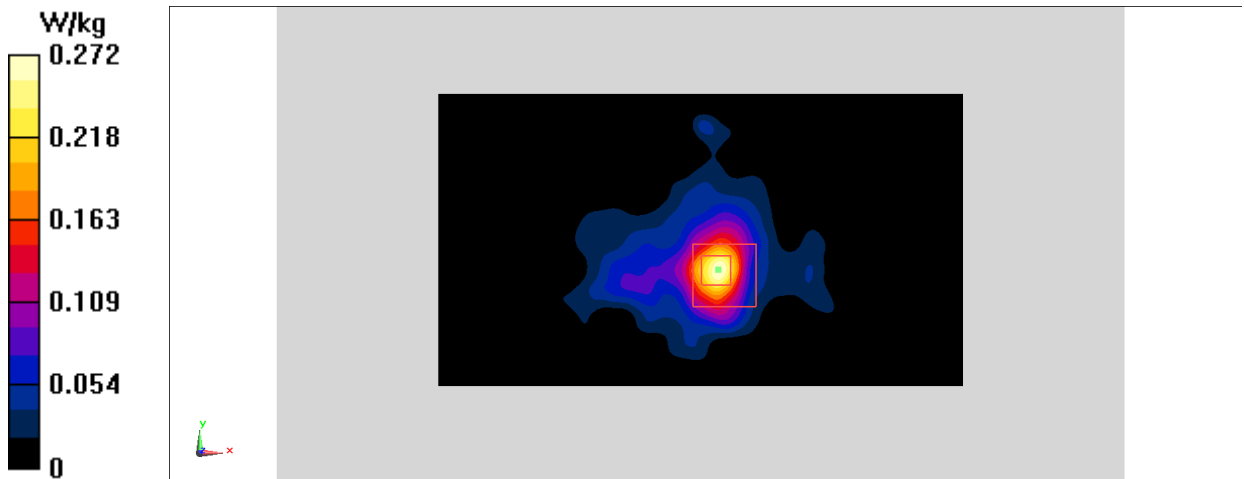


Fig.355GHz



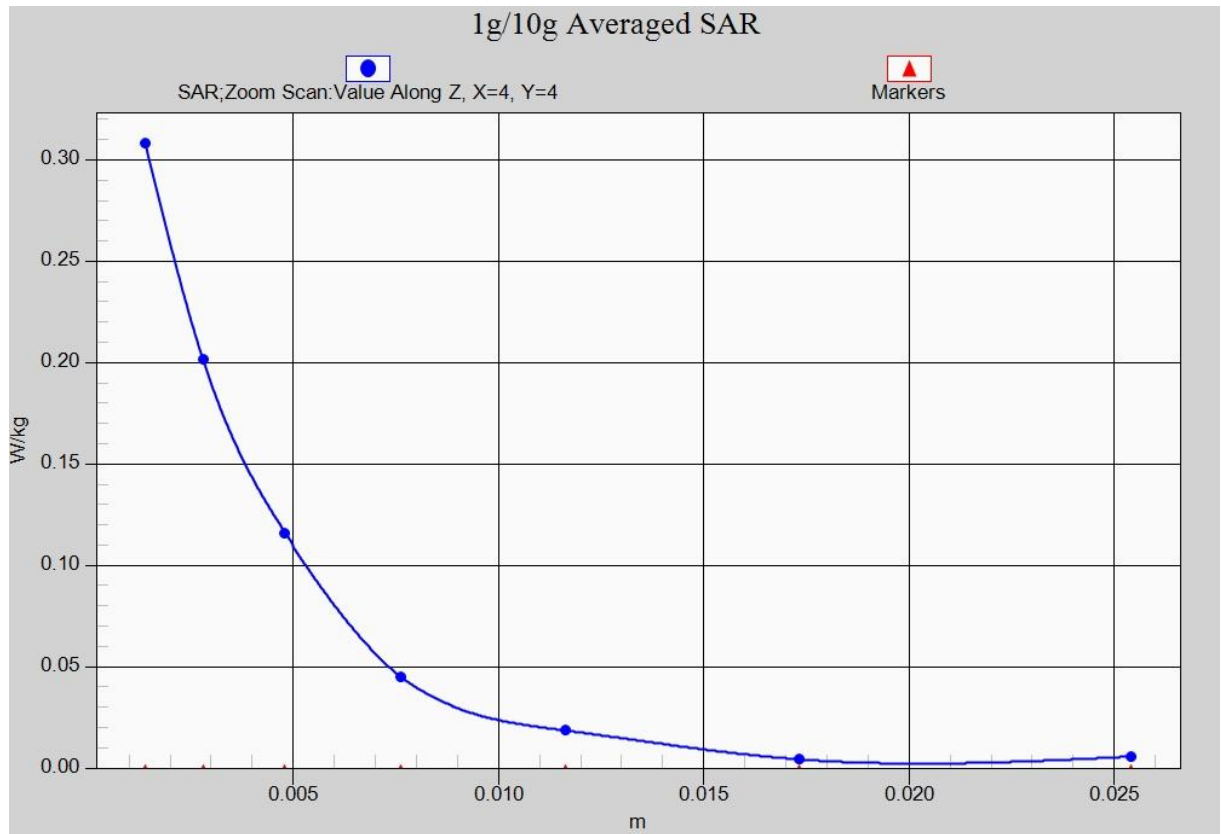


Fig. 35-1 Z-Scan at power reference point (5GHz)