

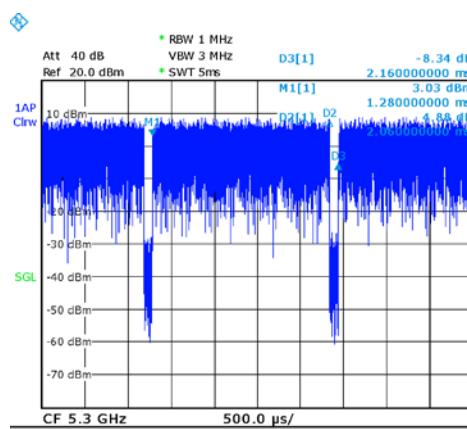
Table 14.4-6: SAR Values (WLAN - Head) – 802.11a 6Mbps

Low Power											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
5300	60	Left	Touch	/	18.04	19	0.188	0.23	0.760	0.95	-0.02
5300	60	Left	Tilt	/	18.04	19	0.108	0.13	0.368	0.46	-0.06
5300	60	Right	Touch	/	18.04	19	0.073	0.09	0.226	0.28	0.09
5300	60	Right	Tilt	/	18.04	19	0.060	0.07	0.189	0.24	0.07
5580	116	Left	Touch	/	15.15	15.5	0.171	0.19	0.780	0.85	0.03
5580	116	Left	Tilt	/	15.15	15.5	0.079	0.09	0.256	0.28	0.09
5580	116	Right	Touch	/	15.15	15.5	0.061	0.07	0.227	0.25	0.02
5580	116	Right	Tilt	/	15.15	15.5	0.042	0.04	0.138	0.15	0.08
5825	165	Left	Touch	Fig.19	12.77	14	0.163	0.22	0.762	1.01	0.00
5825	165	Left	Tilt	/	12.77	14	0.096	0.13	0.398	0.53	-0.02
5825	165	Right	Touch	/	12.77	14	0.085	0.11	0.310	0.41	0.00
5825	165	Right	Tilt	/	12.77	14	0.060	0.08	0.207	0.27	0.00
5320	64	Left	Touch	/	17.94	19	0.169	0.22	0.728	0.93	0.10
5560	112	Left	Touch	/	15.19	15.5	0.182	0.20	0.725	0.78	0.15
5785	157	Left	Touch	/	12.45	13.8	0.170	0.23	0.670	0.91	0.11

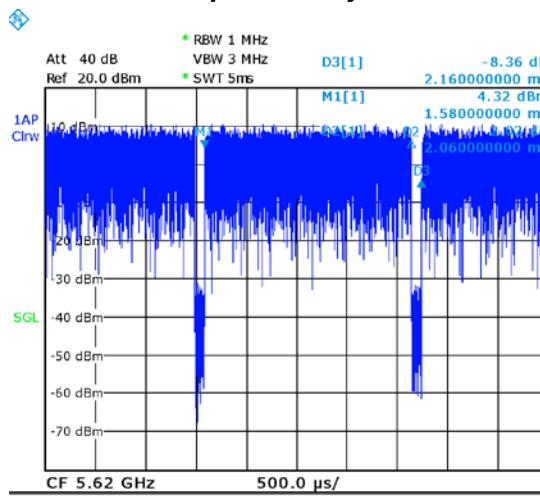
According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit. The scaled reported SAR is presented as below.

Table 14.4-7: SAR Values (WLAN - Head) – 802.11a 6Mbps (Scaled Reported SAR)

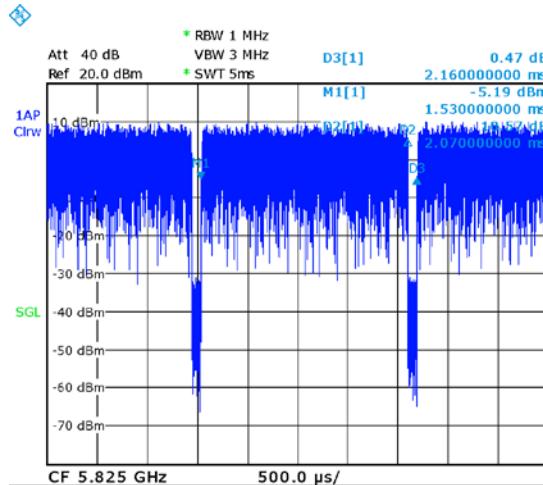
Low Power						
Frequency		Side	Test Position	Actual duty	maximum	Reported SAR
MHz	Ch.			factor	duty factor	(1g) (W/kg)
5300	60	Left	Touch	95.37%	100%	0.95
5580	116	Left	Touch	95.37%	100%	0.85
5825	165	Left	Touch	95.38%	100%	1.01



Picture 14.3 The plot of duty factor for CH60



Picture 14.4 The plot of duty factor for CH116



Picture 14.5 The plot of duty factor for CH165

Normal Power

Table 14.4-8: 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 14.4-9: 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	126		126	100	126	100	71	
U-NII-2A	126		126	100	126	100	71	
U-NII-2C	112		112	100	112	100	71	
U-NII-3	100		100	100	100	100	71	
§ 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.
- For SAR test reduction in the 2.4GHz band, the maximum output specified for production units is 63mW for 802.11b and the highest reported SAR for DSSS is 1.39 W/kg for head, 0.29 W/kg for body.

Table 14.4-10: 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 87/89/93/98	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 95/96/99/96	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 99/98/98/99 116/132/136/140 100/86/80/77	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 81/82/84/89/90	149/153/157/161 /165 Lower power	151/159 Lower power	149/153/157/161 /165 Lower power	151/159 Lower power	155 Lower power
Channels selected for initial test configuration are highlighted in yellow.						

Table 14.4-11: 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 0.70	52/56/60/64	54/62	52/56/60/64	54/62	58
U-NII-2C	100/104/108/112 116/132/136/140 0.82	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 0.86	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 $\leq 1.2\text{W/kg}$, SAR is not required for U-NII-1 band.

Table 14.4-12: Reported SAR of next highest measured output channel in 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 0.67	52/56/60/64	54/62	52/56/60/64	54/62	58
U-NII-2C	100/104/108/112 116/132/136/140 0.82 / 0.77	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 0.86 / 0.79	149/153/157/161/ 165	151/159	149/153/157/161/ 165	151/159	155

- 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.
- Initial test configuration SAR for U-NII-2C 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 ≤ 1.2 W/kg, SAR is not required for subsequent next highest output channel. Similar circumstances apply to U-NII-3 band.
- Adjusted SAR according to the ratio of the specified maximum output power of subsequent test configuration to initial test configuration is ≤ 1.2 W/kg. Therefore, subsequent test configuration SAR is not required.

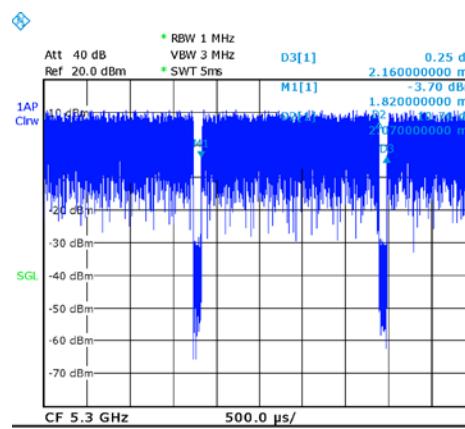
Table 14.4-13: SAR Values (WLAN - Body) – 802.11a 6Mbps

Normal Power											
Frequency		Test Position	D (mm)	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
5300	60	Front	10	/	19.95	21	0.050	0.06	0.138	0.18	-0.06
5300	60	Rear	10	/	19.95	21	0.191	0.24	0.524	0.67	0.09
5300	60	Right	10	/	19.95	21	0.089	0.11	0.215	0.27	0.01
5300	60	Top	10	/	19.95	21	0.027	0.03	0.065	0.08	0.04
5580	116	Front	10	/	19.98	20.5	0.088	0.10	0.285	0.32	0.00
5580	116	Rear	10	/	19.98	20.5	0.259	0.29	0.731	0.82	-0.02
5580	116	Right	10	/	19.98	20.5	0.112	0.13	0.276	0.31	0.07
5580	116	Top	10	/	19.98	20.5	0.058	0.07	0.148	0.17	0.07
5825	165	Front	10	/	19.54	20	0.177	0.20	0.552	0.61	0.02
5825	165	Rear	10	Fig.20	19.54	20	0.259	0.29	0.775	0.86	0.06
5825	165	Front	10	/	19.54	20	0.097	0.11	0.235	0.26	0.05
5825	165	Rear	10	/	19.54	20	0.075	0.08	0.180	0.20	0.01
5560	112	Rear	10	/	19.97	20.5	0.251	0.28	0.684	0.77	0.01
5805	161	Rear	10	/	19.47	19.9	0.276	0.30	0.720	0.79	0.12

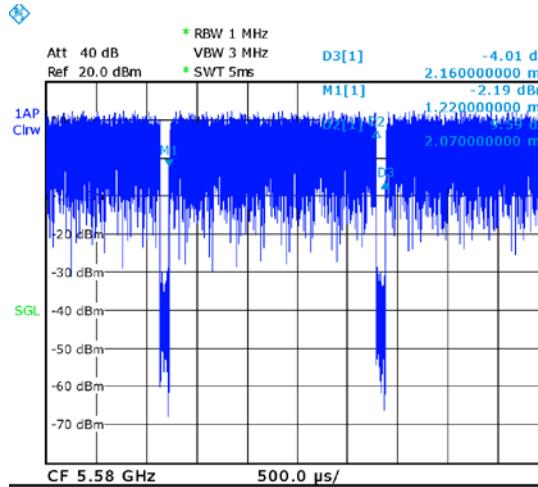
According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit. The scaled reported SAR is presented as below.

Table 14.4-14: SAR Values (WLAN - Body) – 802.11a 6Mbps (Scaled Reported SAR)

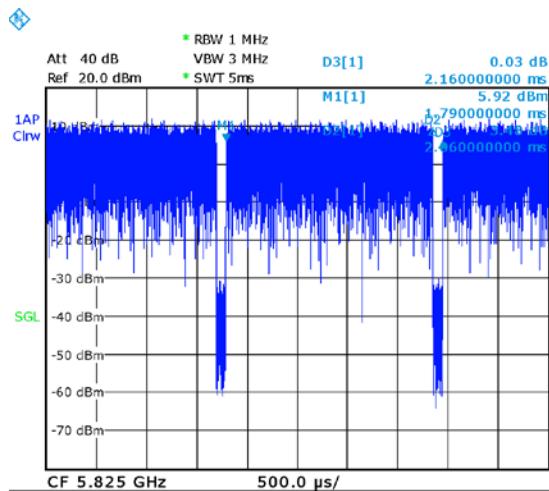
Normal Power					
Frequency		Test Position	Actual duty	maximum	Reported SAR
MHz	Ch.		factor	duty factor	(1g) (W/kg)
5300	60	Rear 10mm	95.83%	100%	0.67
5580	116	Rear 10mm	95.39%	100%	0.82
5825	165	Front 10mm	95.37%	100%	0.61
5825	165	Rear 10mm	95.37%	100%	0.86
					0.90



Picture 14.6 The plot of duty factor for CH60



Picture 14.7 The plot of duty factor for CH116



Picture 14.8 The plot of duty factor for CH165

15 SAR Measurement Variability

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

The following procedures are applied to determine if repeated measurements are required.

- 1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.
- 2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
- 3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
- 4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

Table 15.1: SAR Measurement Variability for Body GSM850 (1g)

Frequency		Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
MHz	Ch.						
836.6	190	Front	10	0.913	0.911	1.00	/

Table 15.2: SAR Measurement Variability for Body WCDMA1700 (1g)

Frequency		Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
MHz	Ch.						
1738	1752.6	Bottom	10	0.892	0.888	1.00	/

Table 15.3: SAR Measurement Variability for Body WCDMA1900 (1g)

Frequency		Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
MHz	Ch.						
1907.6	9938	Bottom	10	0.863	0.855	1.01	/

Table 15.4: SAR Measurement Variability for Body LTE Band2 (1g)

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

Table 15.5: SAR Measurement Variability for Body LTE Band4 (1g)

Frequency		Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
MHz	Ch.						
1745	20300	Bottom	10	1.04	0.901	1.15	/

Table 15.6: SAR Measurement Variability for Body LTE Band12 (1g)

Frequency		Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
MHz	Ch.						
707.5	23095	Front	10	0.817	0.816	1.00	/

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 freedo m
Measurement system										
1	Probe calibration	B	6.0	N	1	1	1	6.0	6.0	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	N	1	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RF ambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. restrictions	B	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	∞
12	Probe positioning with respect to phantom shell	B	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Test sample related										
14	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
15	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
16	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
17	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
18	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
19	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
20	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
21	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521

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

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

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

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

Test sample related

14	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
15	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
16	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞

Phantom and set-up

17	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
18	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
19	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43

20	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
21	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
	Combined standard uncertainty	$u_c = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$						10.7	10.6	257
	Expanded uncertainty (confidence interval of 95 %)	$u_e = 2u_c$						21.4	21.1	

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

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedo m
Measurement system										
1	Probe calibration	B	6.0	N	1	1	1	6.0	6.0	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RF ambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. Restrictions	B	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	∞
12	Probe positioning with respect to phantom shell	B	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
14	Fast SAR z-Approximation	B	7.0	R	$\sqrt{3}$	1	1	4.0	4.0	∞
Test sample related										
15	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
16	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
17	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞

Phantom and set-up										
18	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
19	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
20	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
21	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
22	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						10.4	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
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Measurement system

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	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
14	Fast SAR z-Approximation	B	14.0	R	$\sqrt{3}$	1	1	8.1	8.1	∞

Test sample related

15	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
16	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
17	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
18	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
19	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
20	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
21	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
22	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						13.5	13.4	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						27.0	26.8	

17 MAIN TEST INSTRUMENTS

Table 17.1: List of Main Instruments

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

END OF REPORT BODY

ANNEX A Graph Results

850 Right Cheek Low

Date: 2016-4-25

Electronics: DAE4 Sn777

Medium: Head 850 MHz

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.911$ mho/m; $\epsilon_r = 42.95$; $\rho = 1000$ kg/m³

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

Communication System: GSM 850 Frequency: 824.2 MHz Duty Cycle: 1:8.3

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

Area Scan (71x131x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.0773 W/kg

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

Reference Value = 1.161 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.0860 W/kg

SAR(1 g) = 0.071 W/kg; SAR(10 g) = 0.056 W/kg

Maximum value of SAR (measured) = 0.0769 W/kg

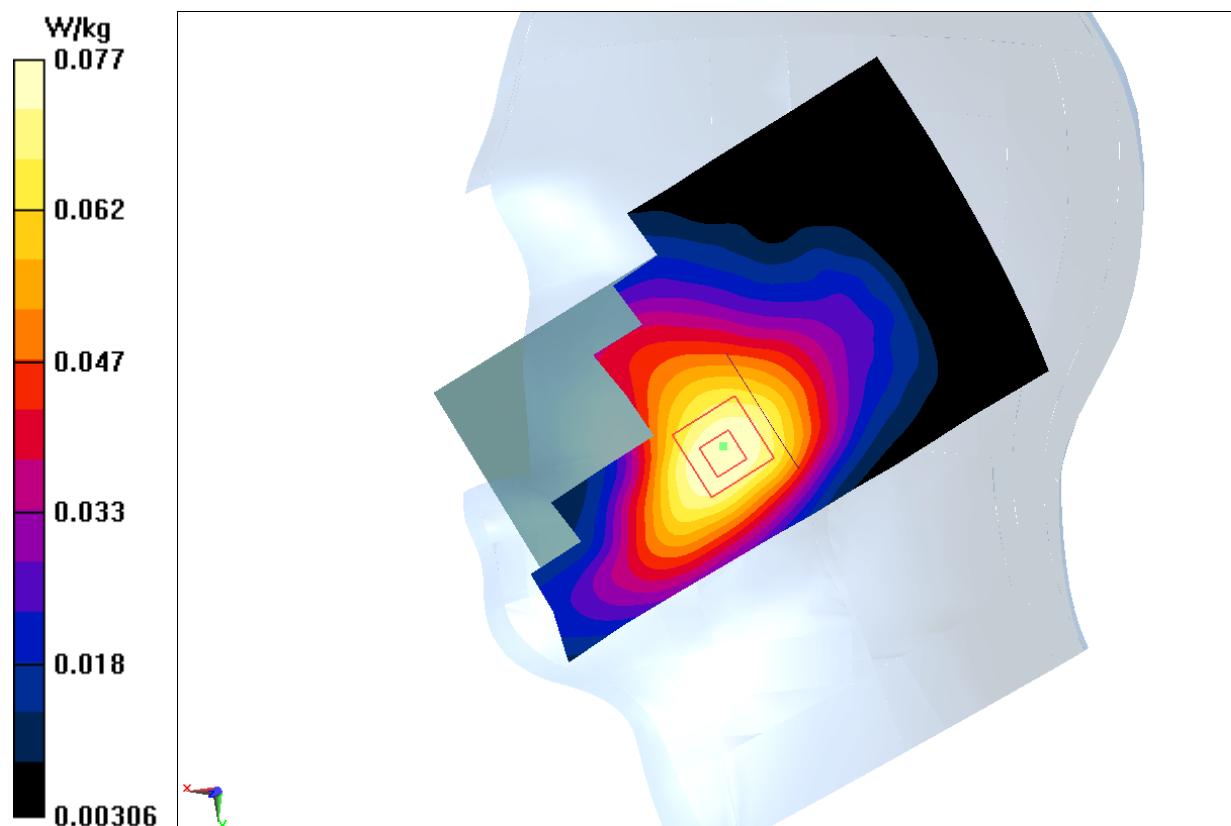


Fig.1 850MHz

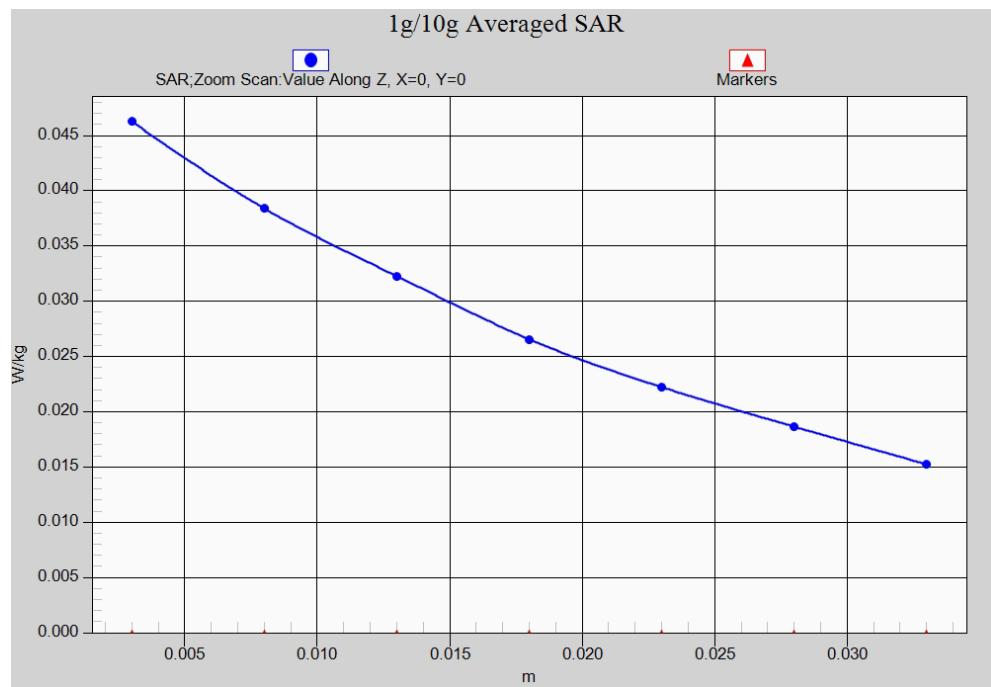


Fig. 1-1 Z-Scan at power reference point (850 MHz)

850 Body Front Middle

Date: 2016-4-25

Electronics: DAE4 Sn777

Medium: Body 850 MHz

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.924$ mho/m; $\epsilon_r = 54.38$; $\rho = 1000$ kg/m³

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

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:2

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

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

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

Reference Value = 13.79 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.48 W/kg

SAR(1 g) = 0.913 W/kg; SAR(10 g) = 0.529 W/kg

Maximum value of SAR (measured) = 1.11 W/kg

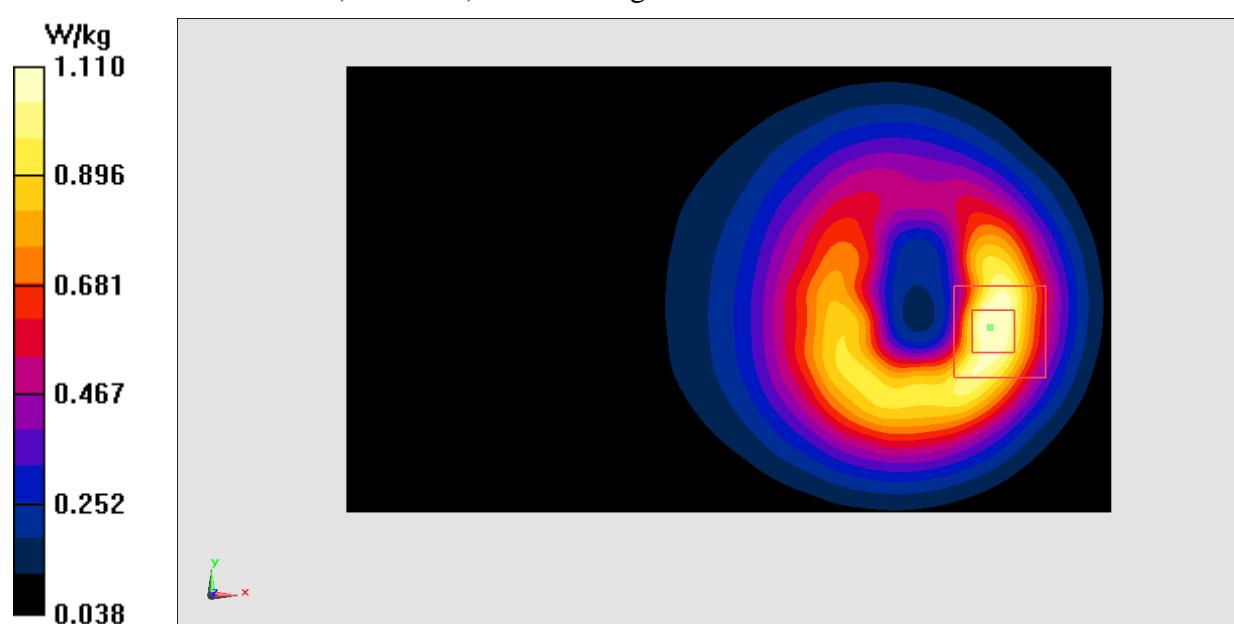


Fig.2 850 MHz

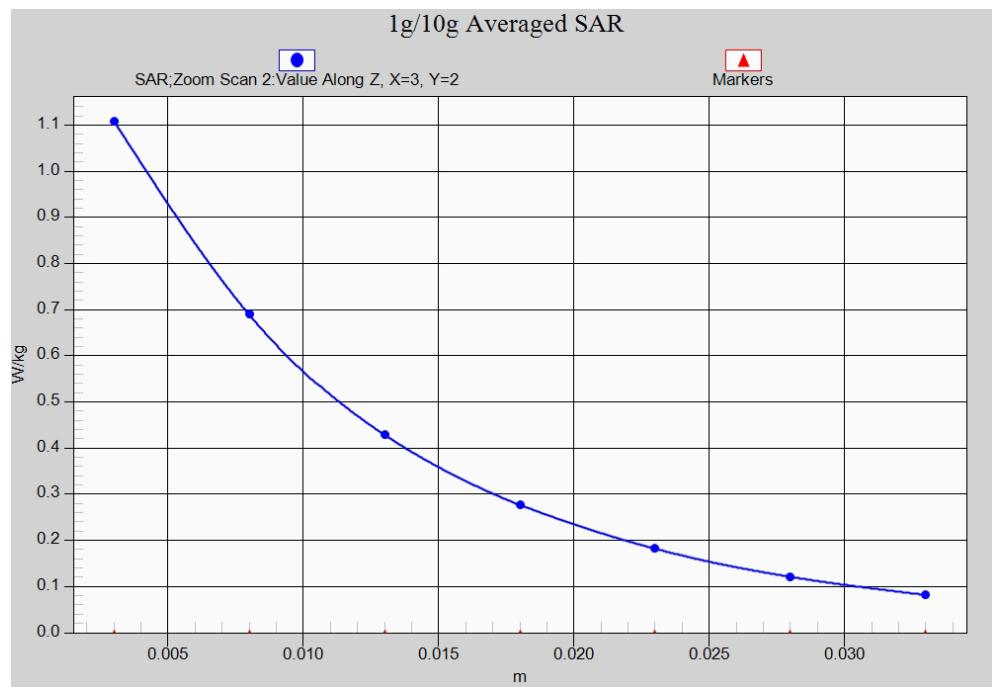


Fig. 2-1 Z-Scan at power reference point (850 MHz)

1900 Left Cheek High

Date: 2016-5-5

Electronics: DAE4 Sn777

Medium: Head 1900 MHz

Medium parameters used: $f = 1909.8 \text{ MHz}$; $\sigma = 1.425 \text{ mho/m}$; $\epsilon_r = 39.09$; $\rho = 1000 \text{ kg/m}^3$

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

Communication System: GSM 1900MHz Frequency: 1909.8 MHz Duty Cycle: 1:8.3

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

Area Scan (71x121x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.130 W/kg

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

Reference Value = 3.891 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.160 W/kg

SAR(1 g) = 0.106 W/kg; SAR(10 g) = 0.066 W/kg

Maximum value of SAR (measured) = 0.125 W/kg

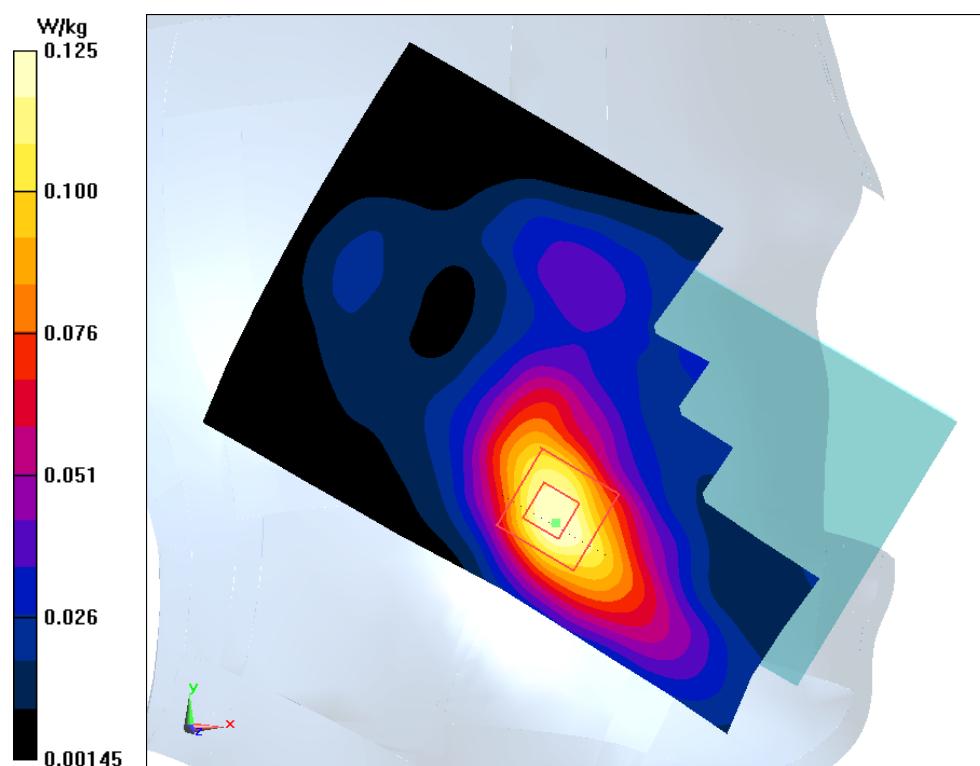


Fig.3 1900 MHz

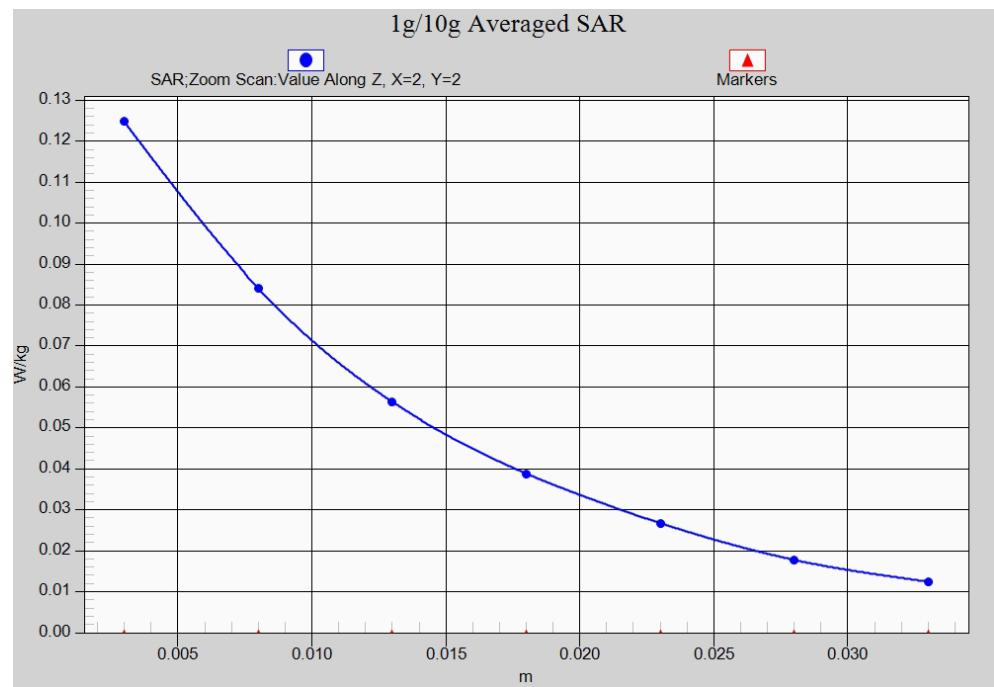


Fig. 3-1 Z-Scan at power reference point (1900 MHz)

1900 Body Bottom Low

Date: 2016-5-5

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used: $f = 1850.2 \text{ MHz}$; $\sigma = 1.491 \text{ mho/m}$; $\epsilon_r = 52.35$; $\rho = 1000 \text{ kg/m}^3$

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

Communication System: GSM 1900MHz GPRS Frequency: 1850.2 MHz Duty Cycle: 1:8

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

Area Scan (121x71x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.502 W/kg

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

Reference Value = 15.90 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.615 W/kg

SAR(1 g) = 0.377 W/kg; SAR(10 g) = 0.211 W/kg

Maximum value of SAR (measured) = 0.505 W/kg

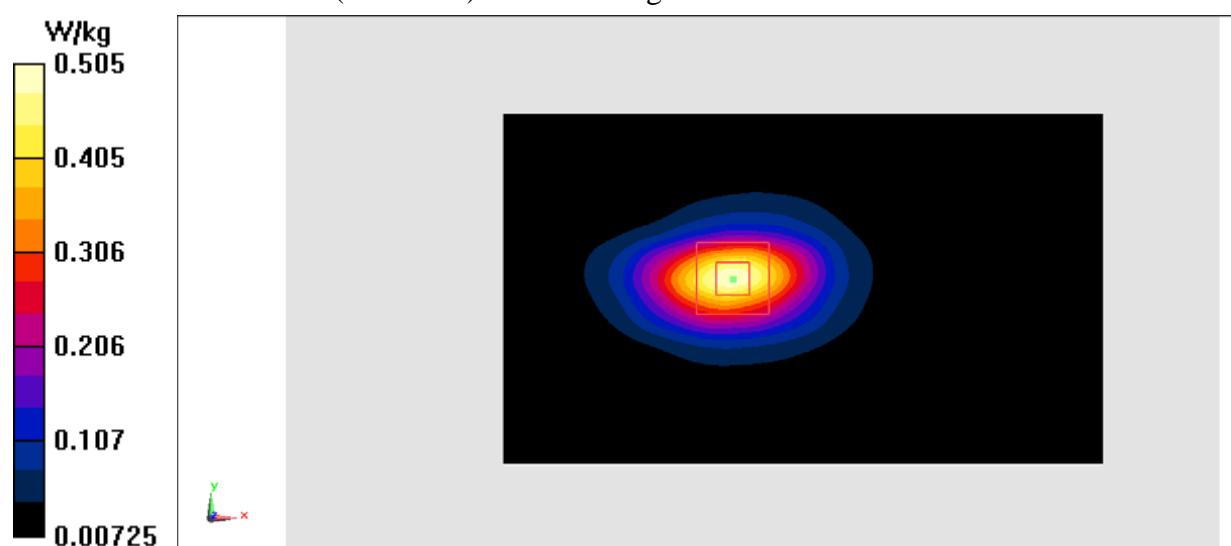


Fig.4 1900 MHz

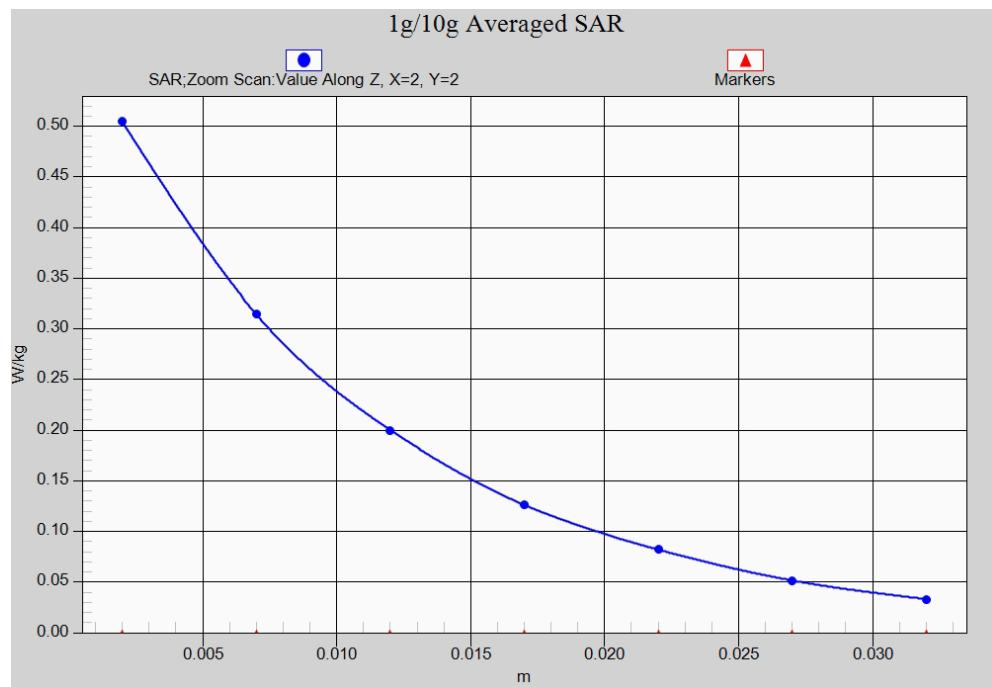


Fig. 4-1 Z-Scan at power reference point (1900 MHz)

WCDMA 850 Right Cheek Low

Date: 2016-4-25

Electronics: DAE4 Sn777

Medium: Head 850 MHz

Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.913$ mho/m; $\epsilon_r = 42.91$; $\rho = 1000$ kg/m³

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

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

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

Area Scan (71x131x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.0471 W/kg

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

Reference Value = 0.7710 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.0520 W/kg

SAR(1 g) = 0.043 W/kg; SAR(10 g) = 0.034 W/kg

Maximum value of SAR (measured) = 0.0461 W/kg

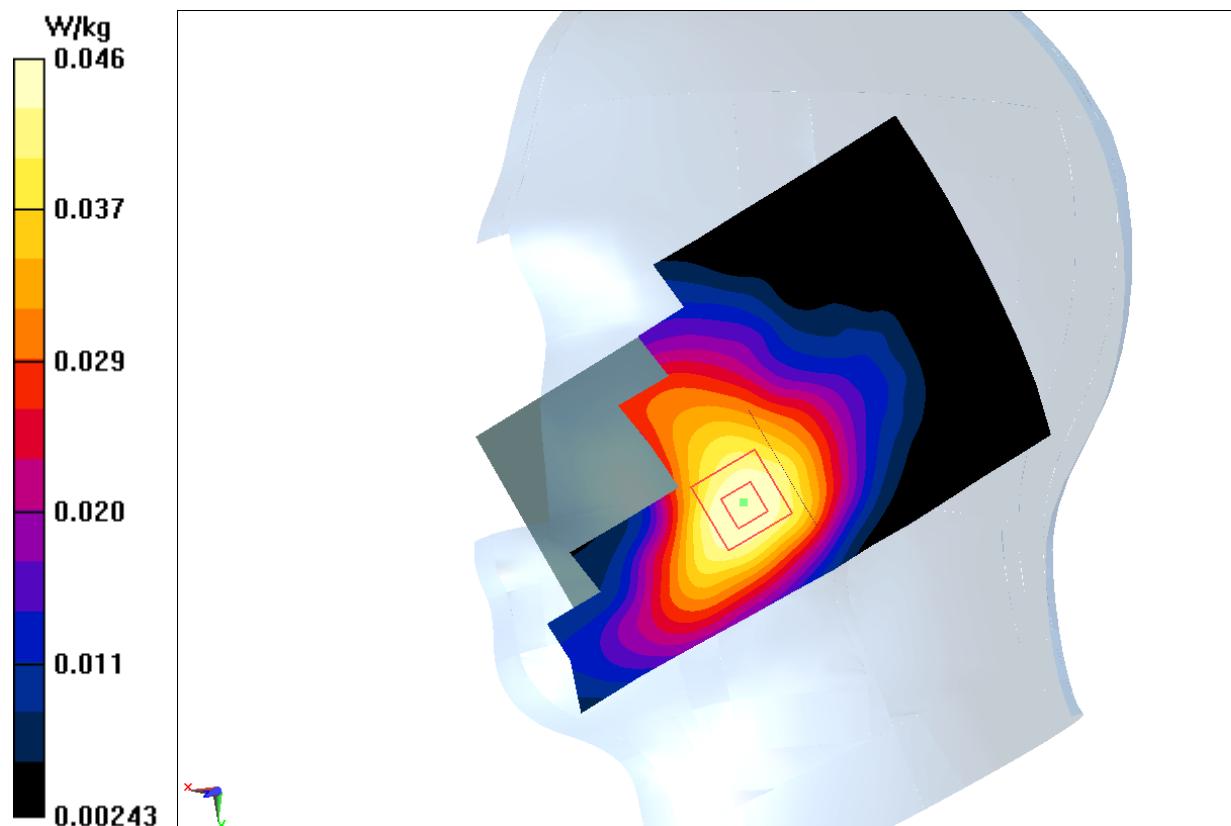


Fig.5 WCDMA 850

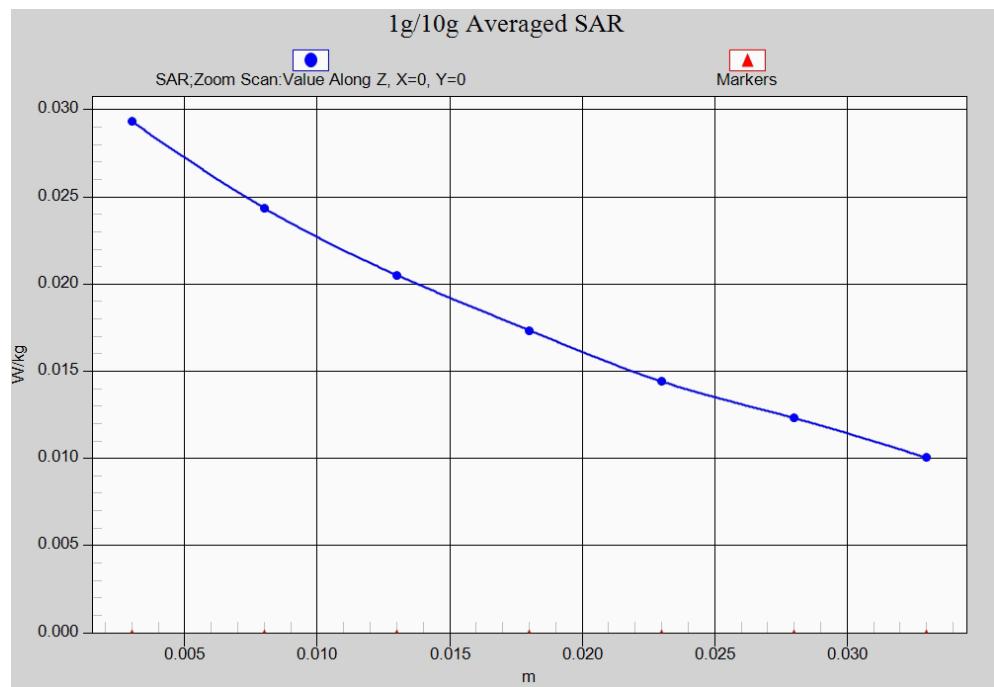


Fig. 5-1 Z-Scan at power reference point (1900 MHz)

WCDMA 850 Body Rear Low

Date: 2016-4-25

Electronics: DAE4 Sn777

Medium: Body 850 MHz

Medium parameters used (interpolated): $f = 836.4$ MHz; $\sigma = 0.921$ mho/m; $\epsilon_r = 54.39$; $\rho = 1000$ kg/m³

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

Communication System: WCDMA; Frequency: 836.4 MHz; Duty Cycle: 1:1

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

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.354 W/kg

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

Reference Value = 9.642 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 0.530 W/kg

SAR(1 g) = 0.318 W/kg; SAR(10 g) = 0.184 W/kg

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

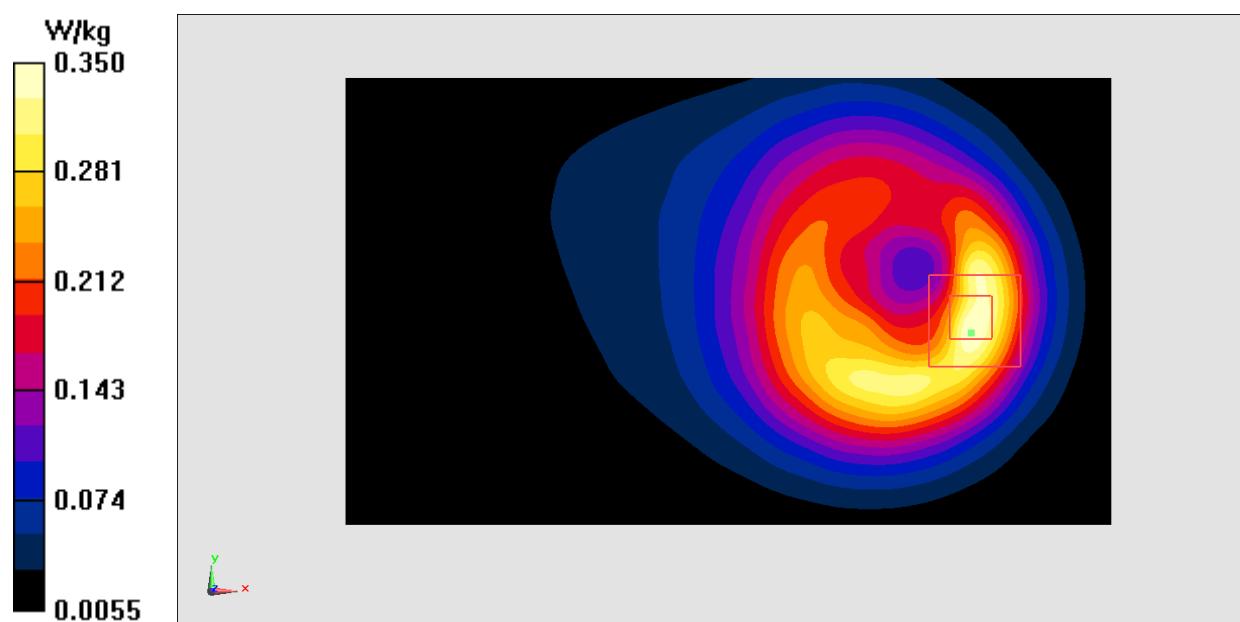


Fig.6 WCDMA 850

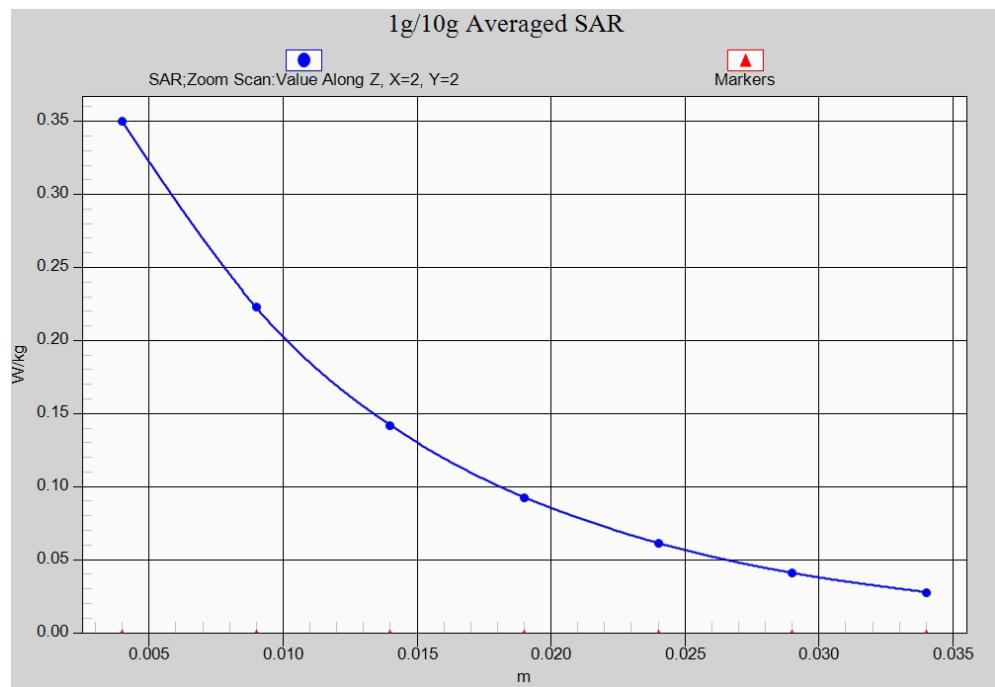


Fig. 6-1 Z-Scan at power reference point (WCDMA850)

WCDMA 1700 Left Cheek Middle

Date: 2016-4-26

Electronics: DAE4 Sn777

Medium: Head 1750 MHz

Medium parameters used (interpolated): $f = 1732.4$ MHz; $\sigma = 1.356$ mho/m; $\epsilon_r = 40.91$; $\rho = 1000$ kg/m³

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

Communication System: WCDMA 1750 Frequency: 1732.4 MHz Duty Cycle: 1:1

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

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

Maximum value of SAR (interpolated) = 0.401 W/kg

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

Reference Value = 4.025 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.496 W/kg

SAR(1 g) = 0.337 W/kg; SAR(10 g) = 0.213 W/kg

Maximum value of SAR (measured) = 0.392 W/kg

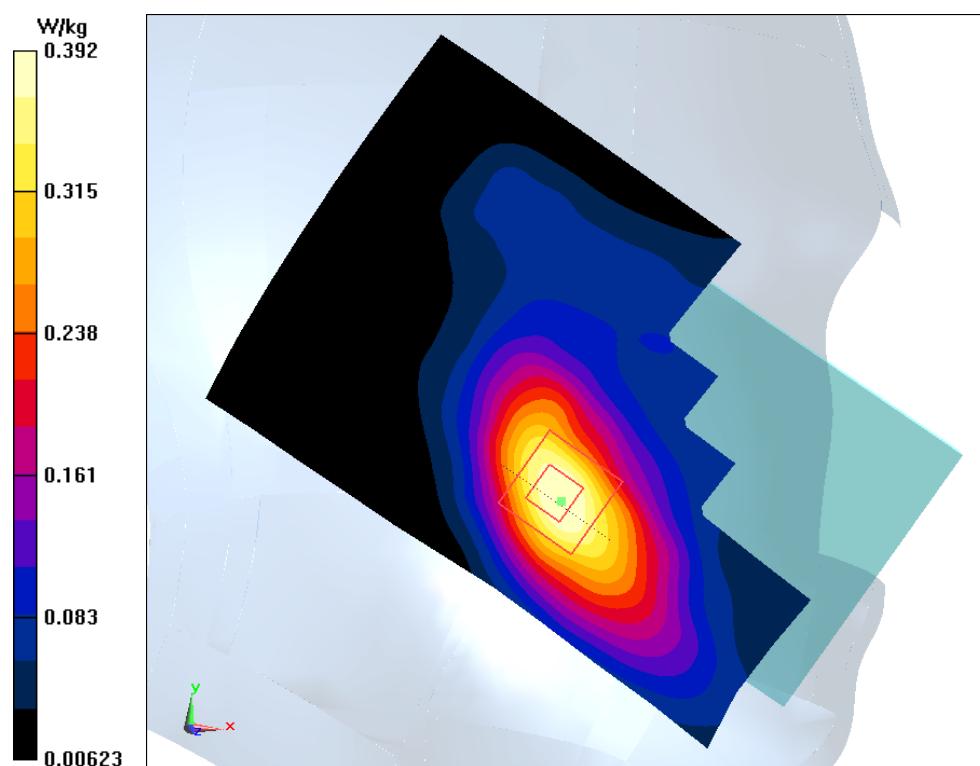


Fig.7 WCDMA1700

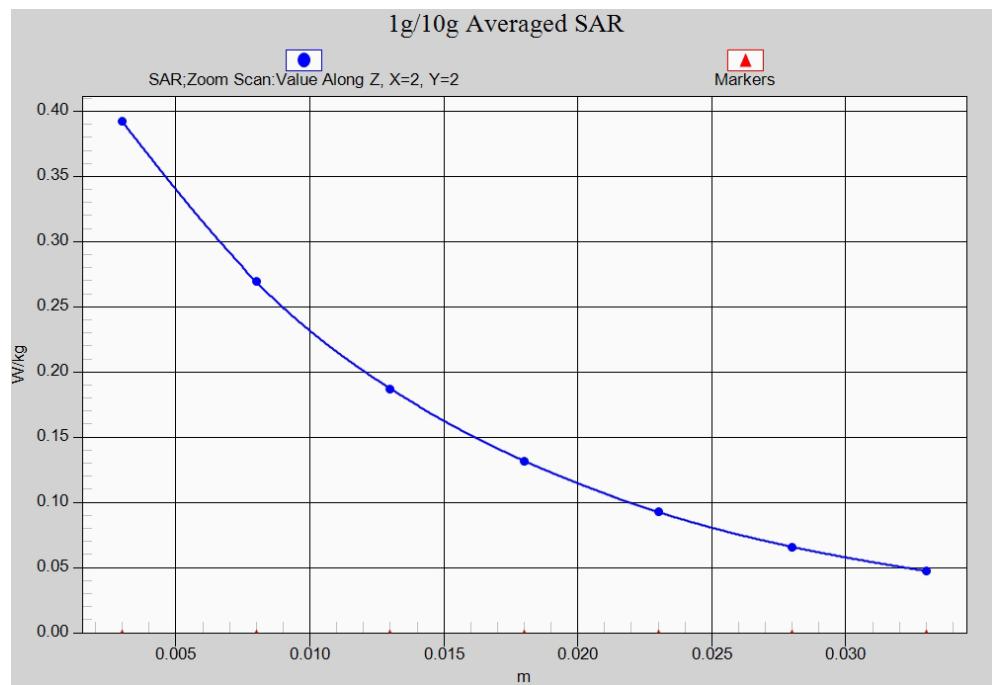


Fig. 7-1 Z-Scan at power reference point (WCDMA1700)

WCDMA 1700 Body Bottom High

Date: 2016-4-26

Electronics: DAE4 Sn777

Medium: Body 1750 MHz

Medium parameters used: $f = 1752.6 \text{ MHz}$; $\sigma = 1.521 \text{ mho/m}$; $\epsilon_r = 54.31$; $\rho = 1000 \text{ kg/m}^3$

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

Communication System: WCDMA 1750 Frequency: 1752.6 MHz Duty Cycle: 1:1

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

Area Scan (121x71x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

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

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

Reference Value = 26.71 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.44 W/kg

SAR(1 g) = 0.892 W/kg; SAR(10 g) = 0.508 W/kg

Maximum value of SAR (measured) = 0.996 W/kg

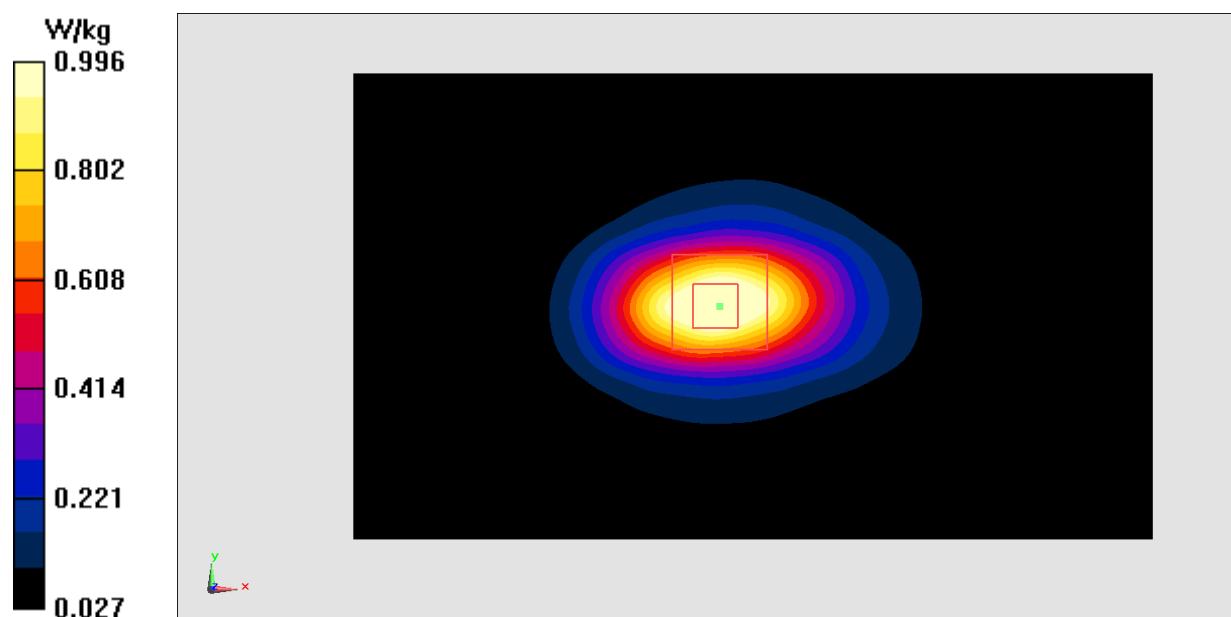


Fig.8 WCDMA1700

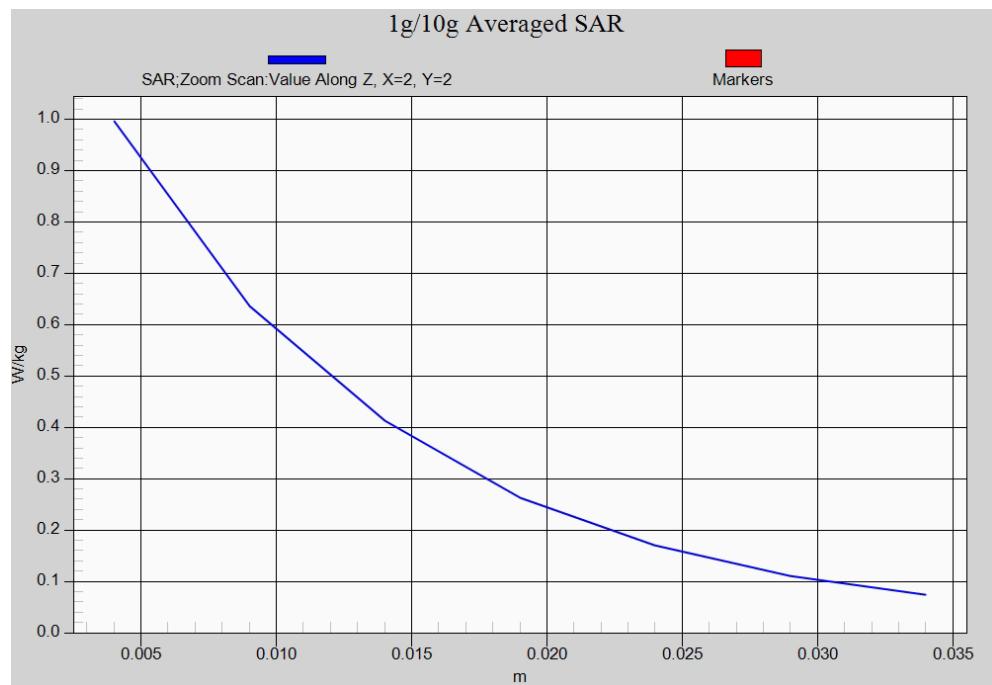


Fig. 8-1 Z-Scan at power reference point (WCDMA1700)

WCDMA 1900 Left Cheek Middle

Date: 2016-5-5

Electronics: DAE4 Sn777

Medium: Head 1900 MHz

Medium parameters used (interpolated): $f = 1880$ MHz; $\sigma = 1.411$ mho/m; $\epsilon_r = 39.85$; $\rho = 1000$ kg/m³

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

Communication System: WCDMA 1900 Frequency: 1880 MHz Duty Cycle: 1:1

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

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

Maximum value of SAR (interpolated) = 0.355 W/kg

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

Reference Value = 7.572 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.448 W/kg

SAR(1 g) = 0.300 W/kg; SAR(10 g) = 0.186 W/kg

Maximum value of SAR (measured) = 0.353 W/kg

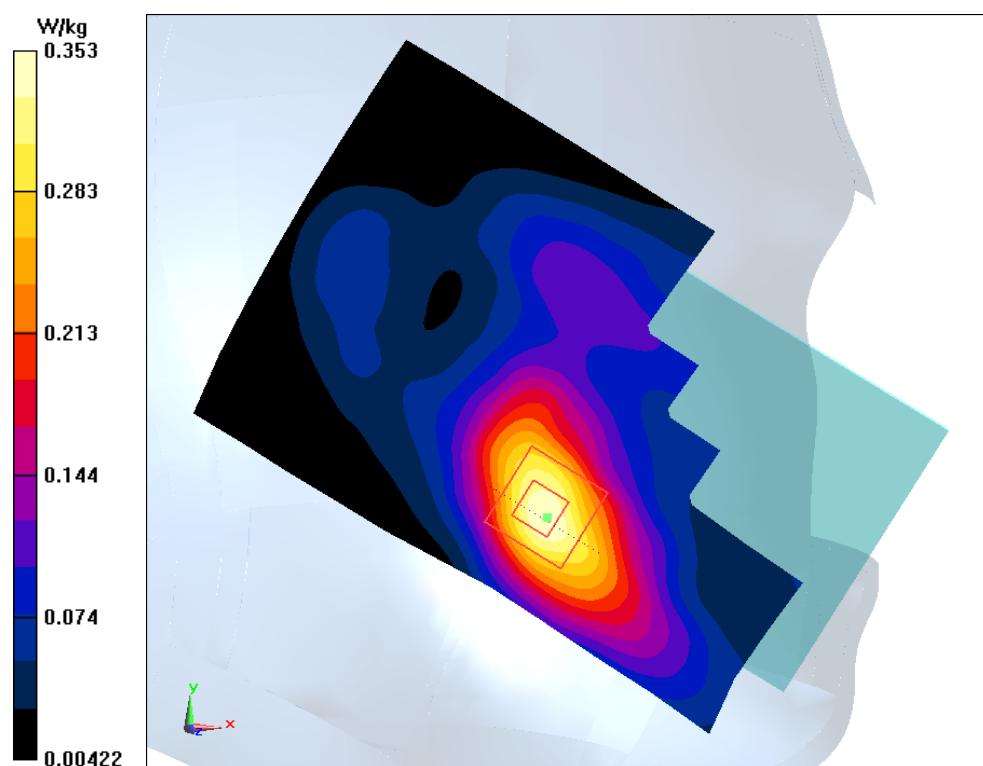


Fig.9 WCDMA1900

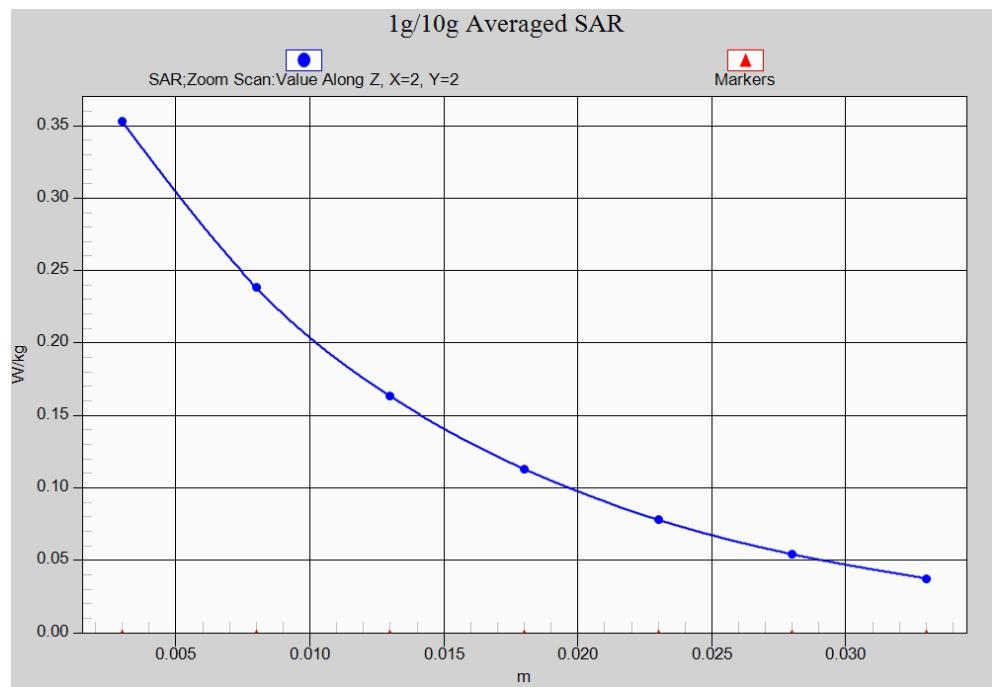


Fig. 9-1 Z-Scan at power reference point (WCDMA1900)

WCDMA 1900 Body Bottom High

Date: 2016-5-5

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used: $f = 1907.6 \text{ MHz}$; $\sigma = 1.549 \text{ mho/m}$; $\epsilon_r = 52.06$; $\rho = 1000 \text{ kg/m}^3$

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

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

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

Area Scan (121x71x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 1.10 W/kg

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

Reference Value = 25.75 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.40 W/kg

SAR(1 g) = 0.863 W/kg; SAR(10 g) = 0.475 W/kg

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

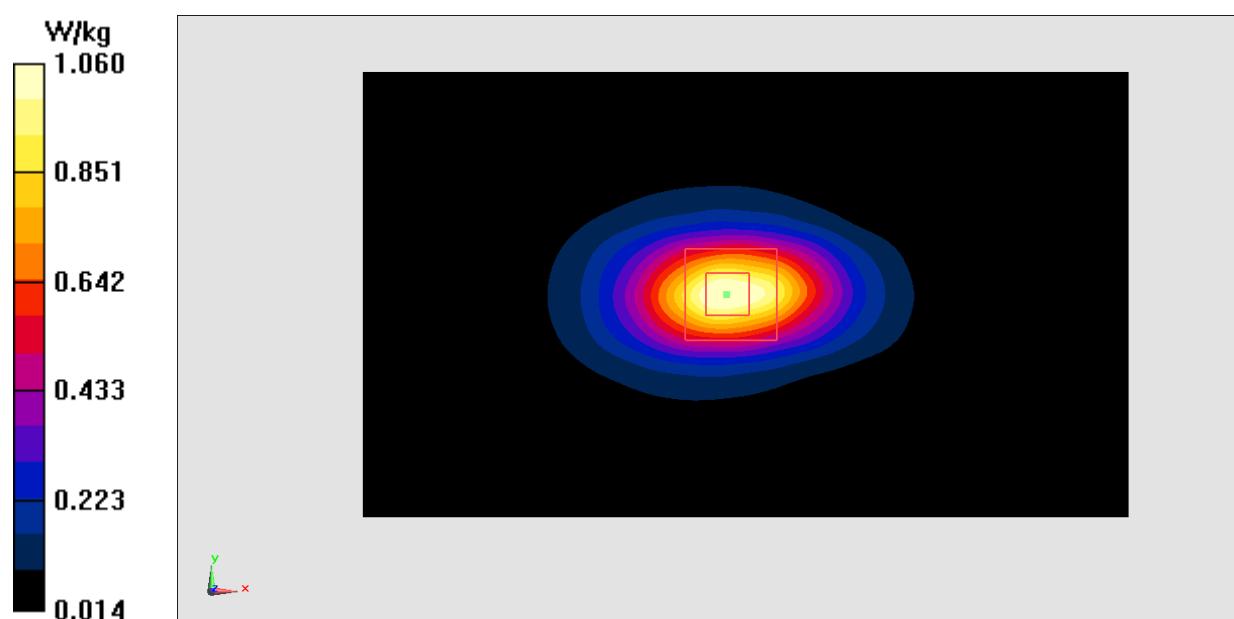


Fig.10 WCDMA1900

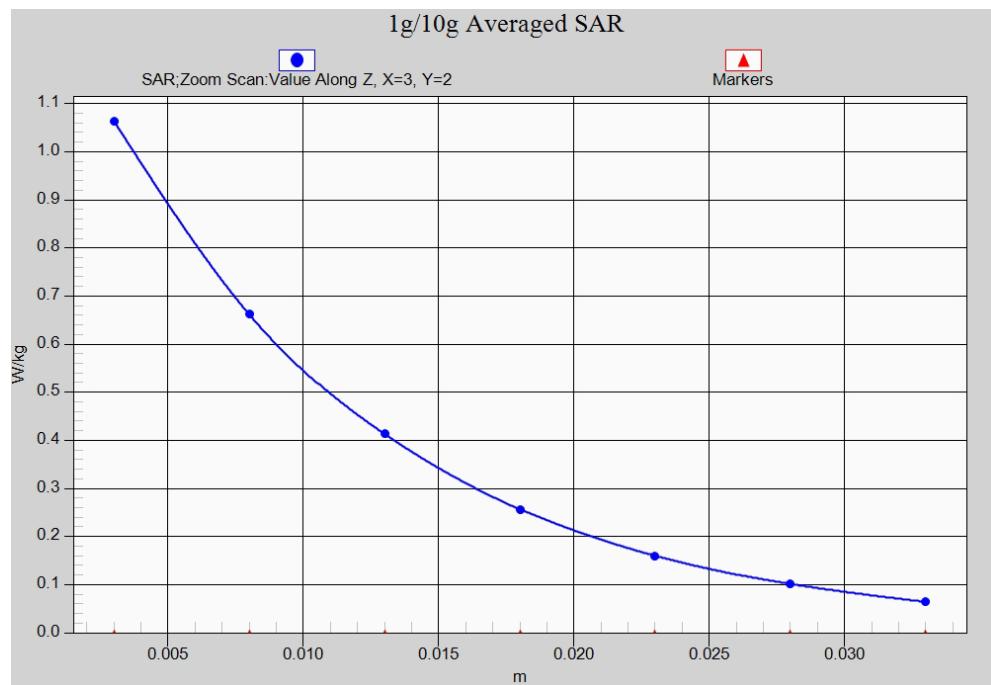


Fig. 10-1 Z-Scan at power reference point (WCDMA1900)

LTE Band2 Left Cheek Low with QPSK_20M_1RB_Low

Date: 2016-5-5

Electronics: DAE4 Sn777

Medium: Head 1900 MHz

Medium parameters used: $f = 1860$ MHz; $\sigma = 1.405$ mho/m; $\epsilon_r = 39.89$; $\rho = 1000$ kg/m 3

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

Communication System: LTE Band2 Frequency: 1860 MHz Duty Cycle: 1:1

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

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

Maximum value of SAR (interpolated) = 0.497 W/kg

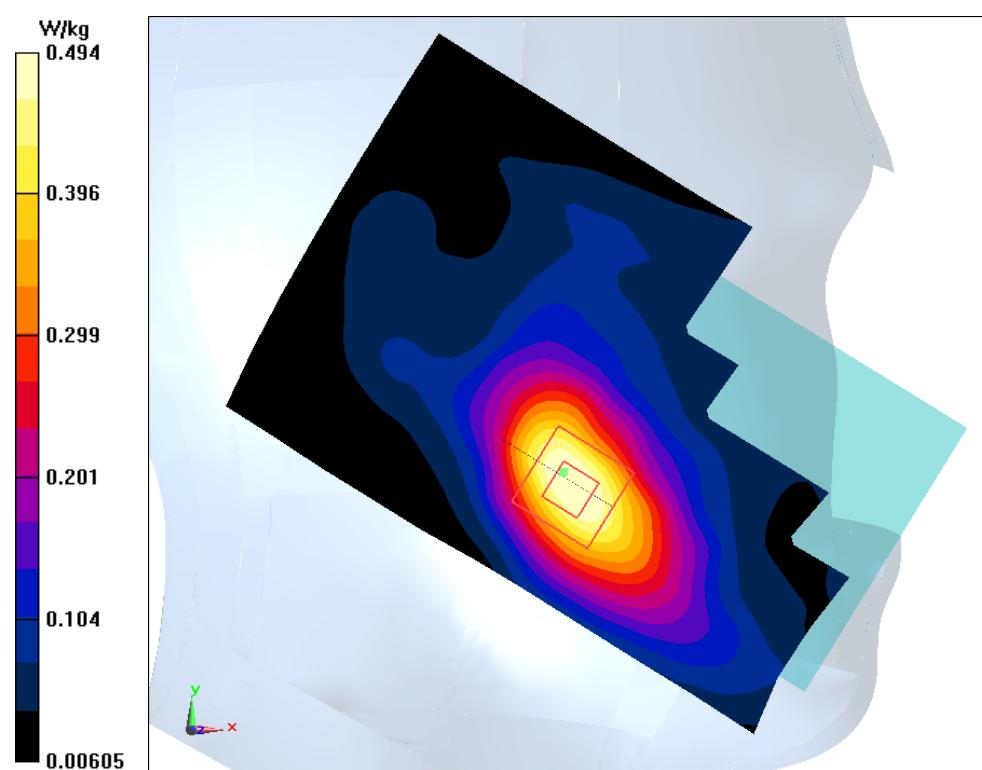
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.149 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.654 W/kg

SAR(1 g) = 0.433 W/kg; SAR(10 g) = 0.267 W/kg

Maximum value of SAR (measured) = 0.494 W/kg

**Fig.11 LTE Band2**

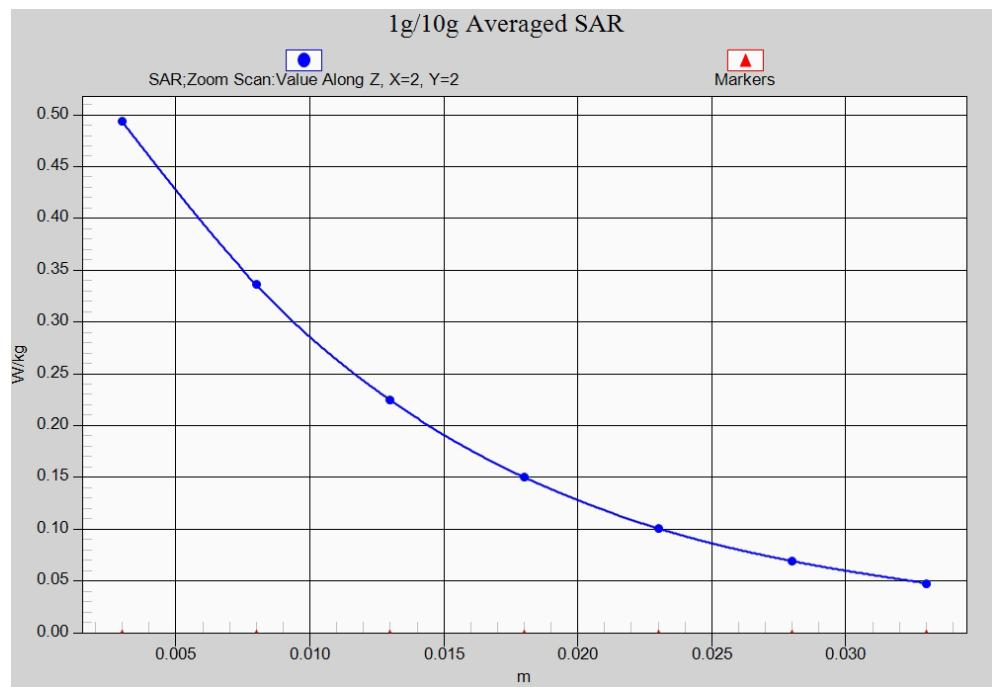


Fig. 11-1 Z-Scan at power reference point (LTE Band2)

LTE Band2 Body Bottom Low with QPSK_20M_1RB_Low

Date: 2016-5-5

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used: $f = 1860$ MHz; $\sigma = 1.496$ mho/m; $\epsilon_r = 52.11$; $\rho = 1000$ kg/m 3

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

Communication System: LTE Band4 Frequency: 1860 MHz Duty Cycle: 1:1

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

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

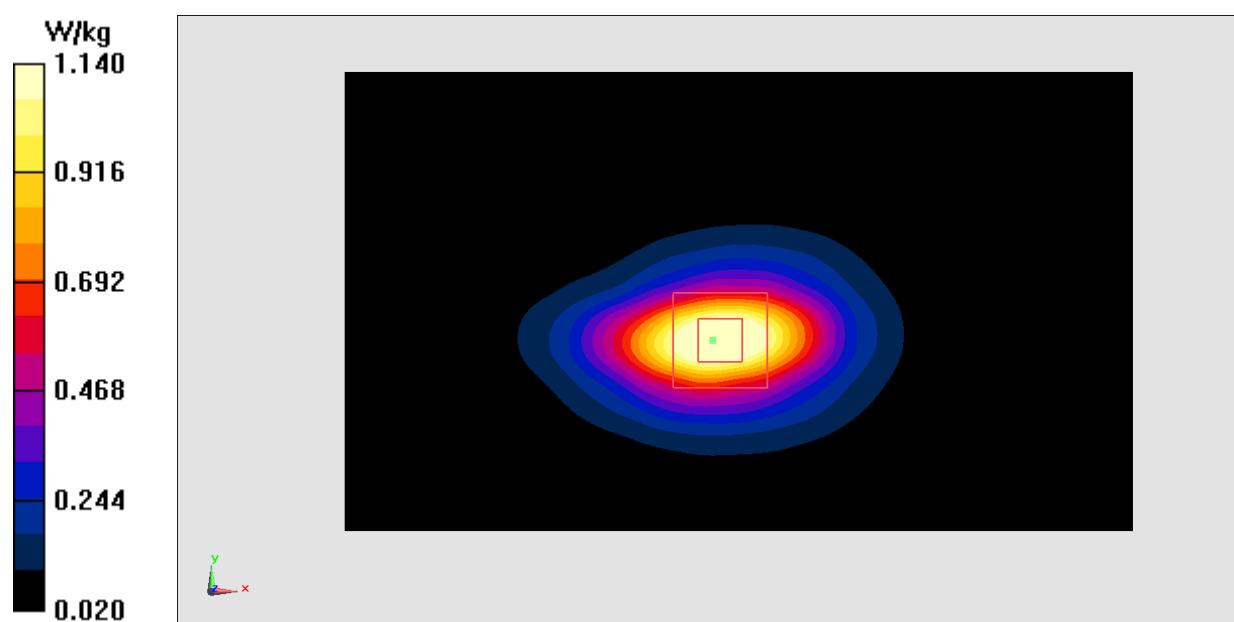
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 22.82 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 1.65 W/kg

SAR(1 g) = 1.03 W/kg; SAR(10 g) = 0.578 W/kg

Maximum value of SAR (measured) = 1.14 W/kg

**Fig.12 LTE Band2**

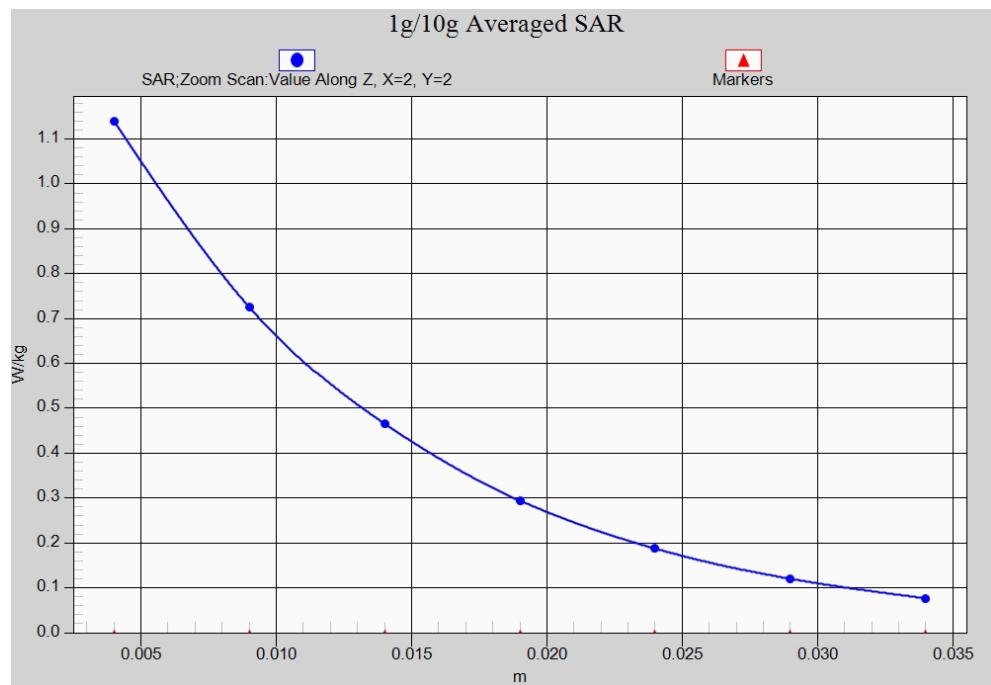


Fig. 12-1 Z-Scan at power reference point (LTE Band2)

LTE Band4 Left Cheek Middle with QPSK_20M_1RB_Low

Date: 2016-4-26

Electronics: DAE4 Sn777

Medium: Head 1750 MHz

Medium parameters used: $f = 1732.5$ MHz; $\sigma = 1.356$ mho/m; $\epsilon_r = 40.89$; $\rho = 1000$ kg/m 3

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

Communication System: LTE Band4 Frequency: 1732.5 MHz Duty Cycle: 1:1

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

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

Maximum value of SAR (interpolated) = 0.414 W/kg

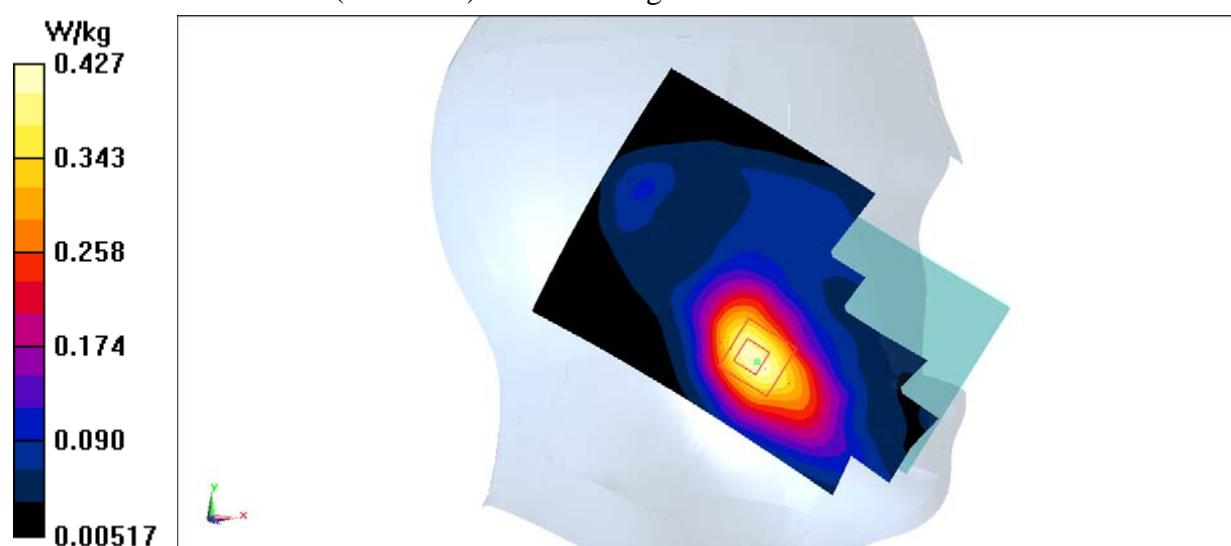
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.459 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.503 W/kg

SAR(1 g) = 0.336 W/kg; SAR(10 g) = 0.212 W/kg

Maximum value of SAR (measured) = 0.427 W/kg

**Fig.13 LTE Band4**

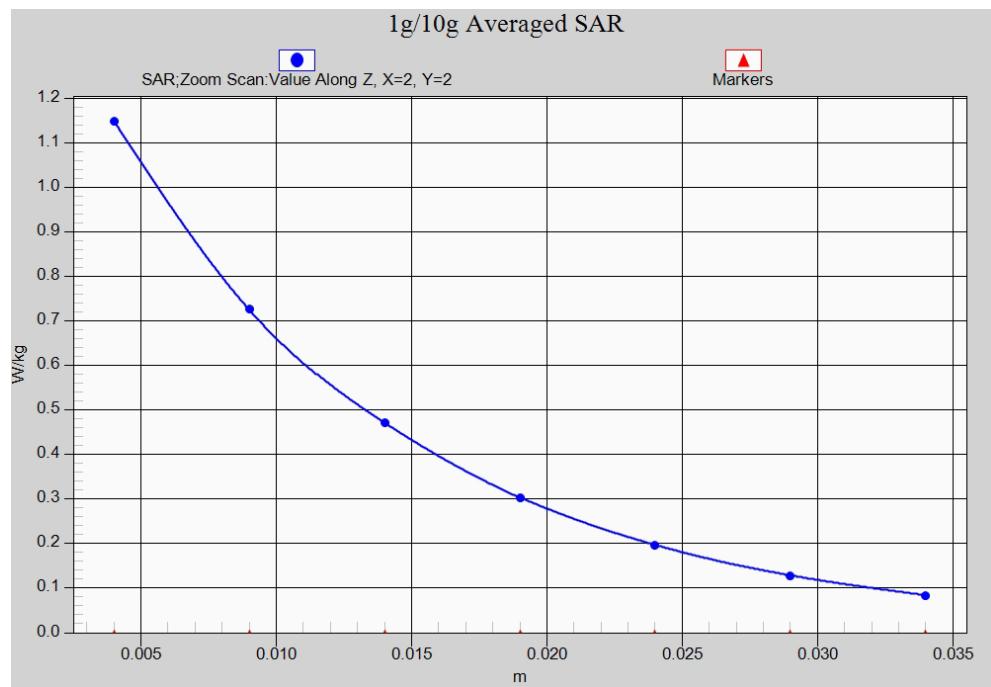


Fig. 13-1 Z-Scan at power reference point (LTE Band4)

LTE Band4 Body Bottom Low with QPSK_20M_1RB_Low

Date: 2016-4-26

Electronics: DAE4 Sn777

Medium: Body 1750 MHz

Medium parameters used: $f = 1720$ MHz; $\sigma = 1.425$ mho/m; $\epsilon_r = 55.86$; $\rho = 1000$ kg/m 3

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

Communication System: LTE Band4 Frequency: 1720 MHz Duty Cycle: 1:1

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

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.18 W/kg

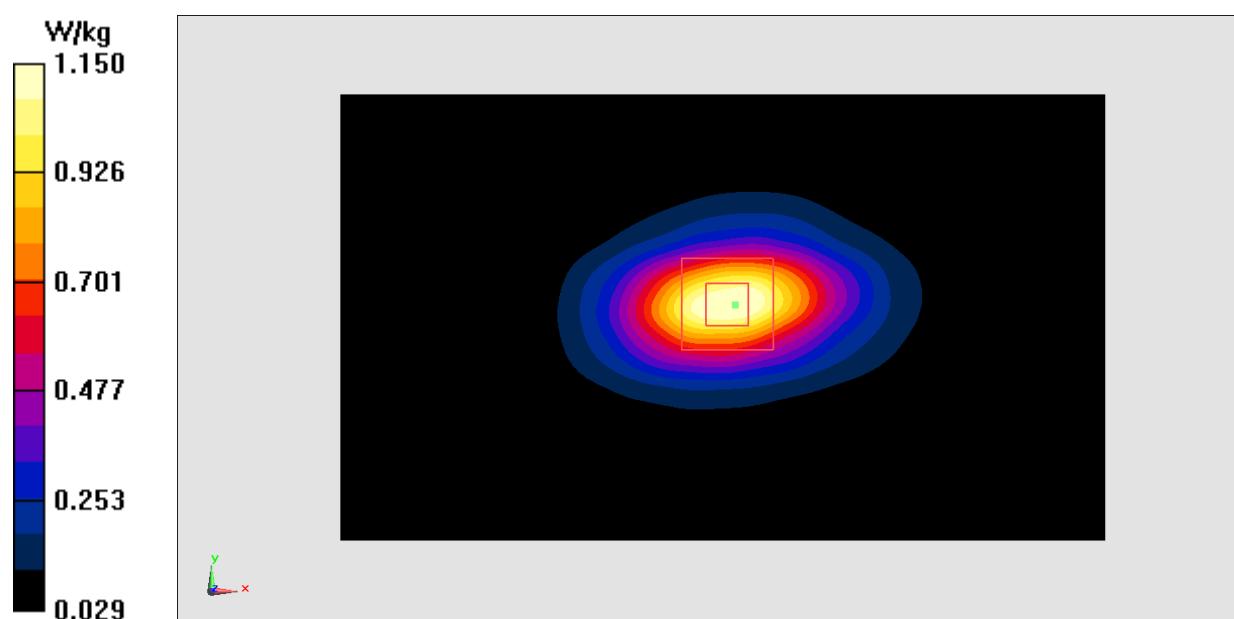
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.62 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.71 W/kg

SAR(1 g) = 1.04 W/kg; SAR(10 g) = 0.586 W/kg

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

**Fig.14 LTE Band4**

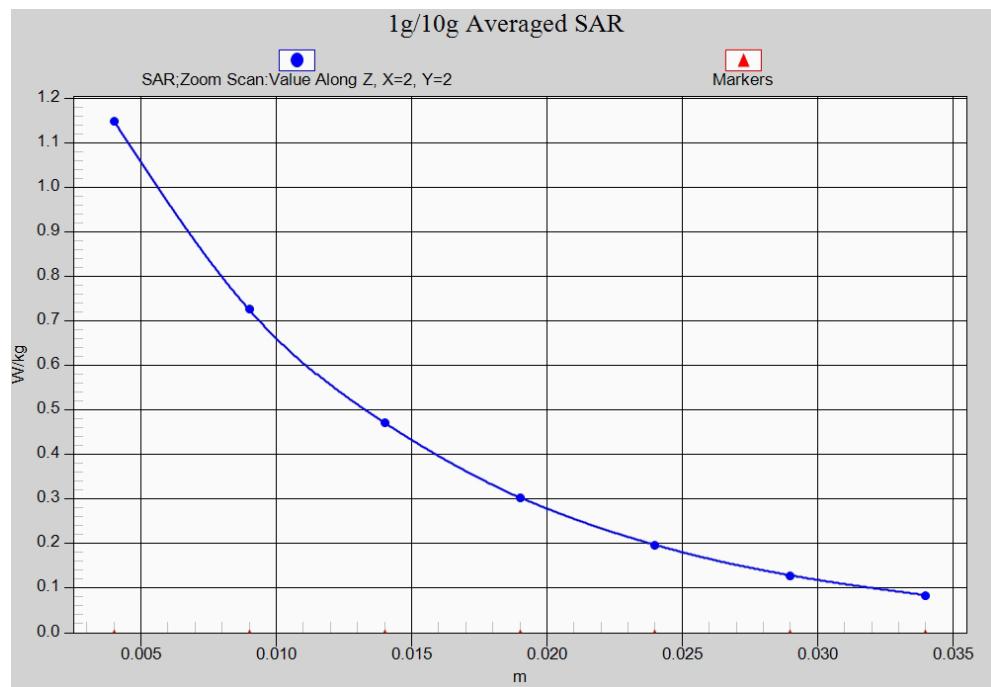


Fig. 14-1 Z-Scan at power reference point (LTE Band4)

LTE Band12 Left Cheek Low with QPSK_10M_1RB_Low

Date: 2016-5-7

Electronics: DAE4 Sn777

Medium: Head 750 MHz

Medium parameters used: $f = 704$ MHz; $\sigma = 0.895$ mho/m; $\epsilon_r = 43.26$; $\rho = 1000$ kg/m³

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

Communication System: LTE Band12 Frequency: 704 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(7.21, 7.21, 7.21)

Area Scan (71x131x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.215 W/kg

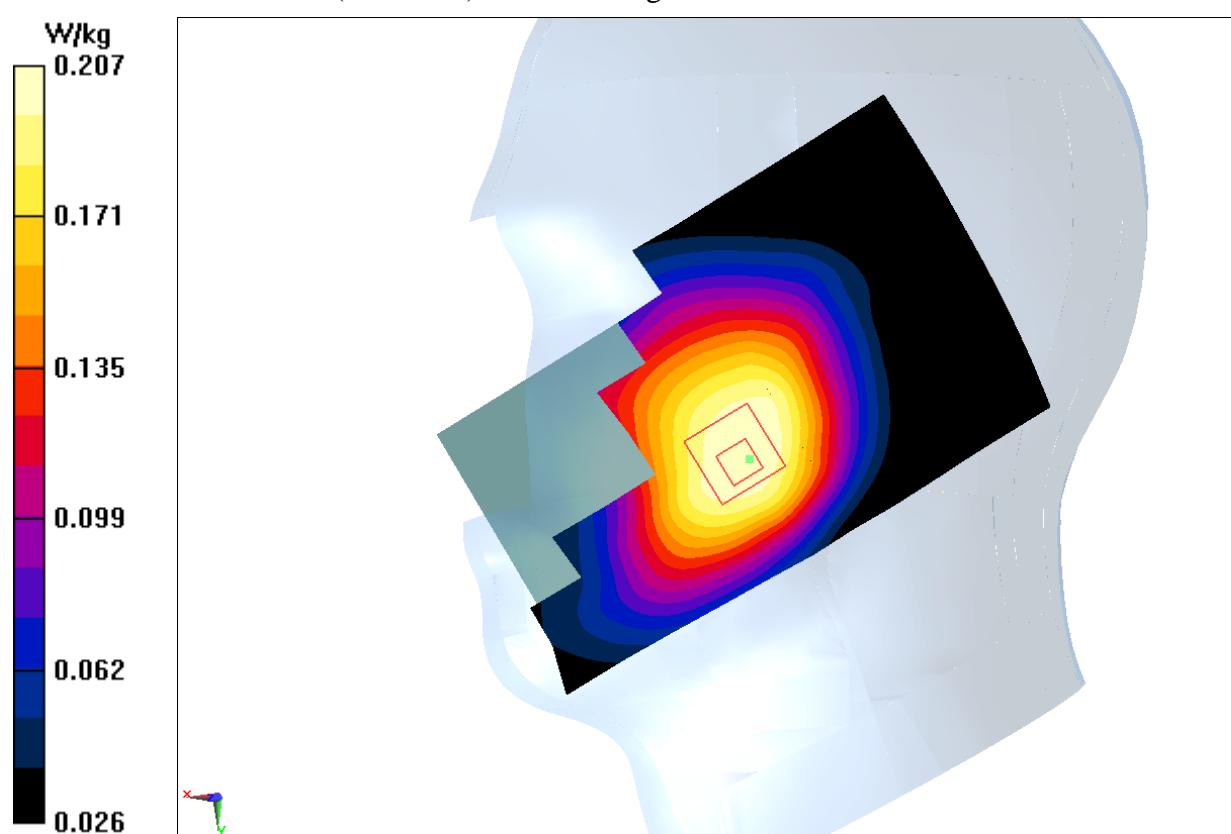
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.567 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.226 W/kg

SAR(1 g) = 0.195 W/kg; SAR(10 g) = 0.160 W/kg

Maximum value of SAR (measured) = 0.207 W/kg

**Fig.15 LTE Band12**

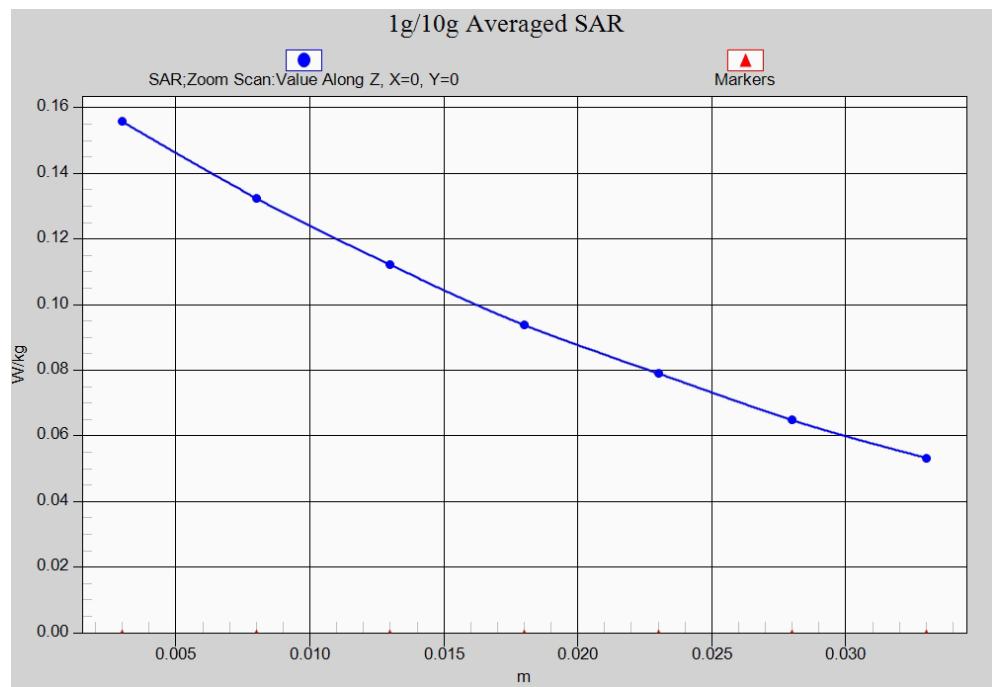


Fig. 15-1 Z-Scan at power reference point (LTE Band12)

LTE Band12 Body Front Low with QPSK_10M_1RB_Low

Date: 2016-5-7

Electronics: DAE4 Sn777

Medium: Body 750 MHz

Medium parameters used: $f = 704 \text{ MHz}$; $\sigma = 0.941 \text{ mho/m}$; $\epsilon_r = 57.11$; $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C

Communication System: LTE Band5 Frequency: 704 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(7.20, 7.20, 7.20)

Area Scan (121x71x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.942 W/kg

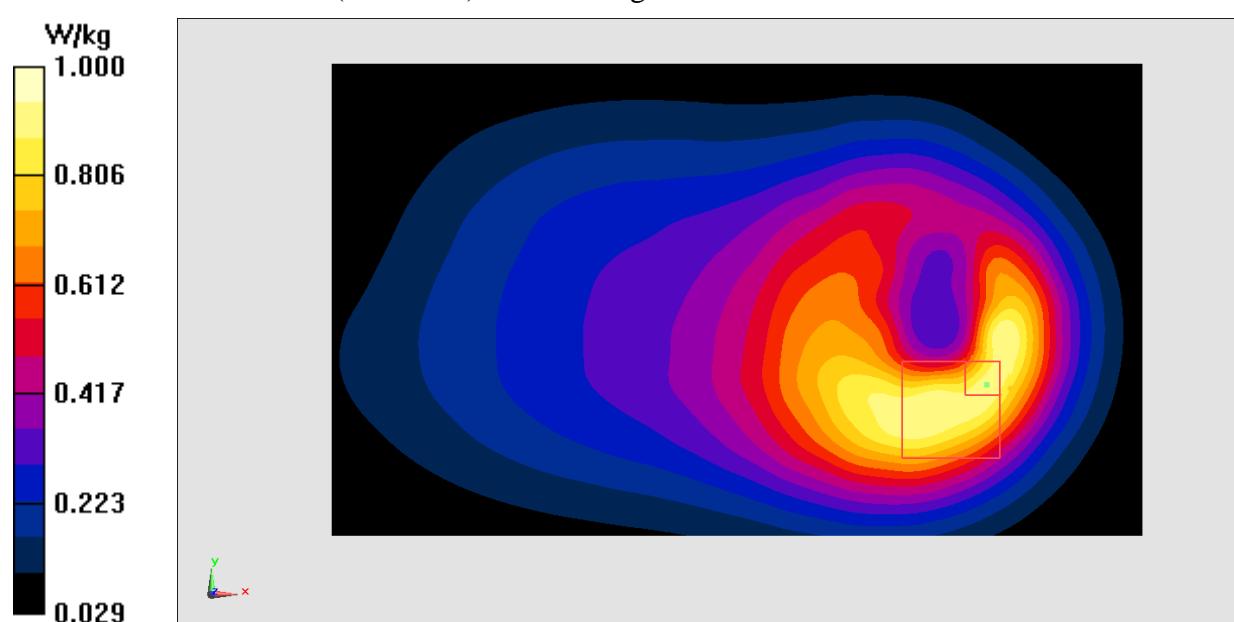
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 20.17 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 1.42 W/kg

SAR(1 g) = 0.817 W/kg; SAR(10 g) = 0.484 W/kg

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

**Fig.16 LTE Band12**

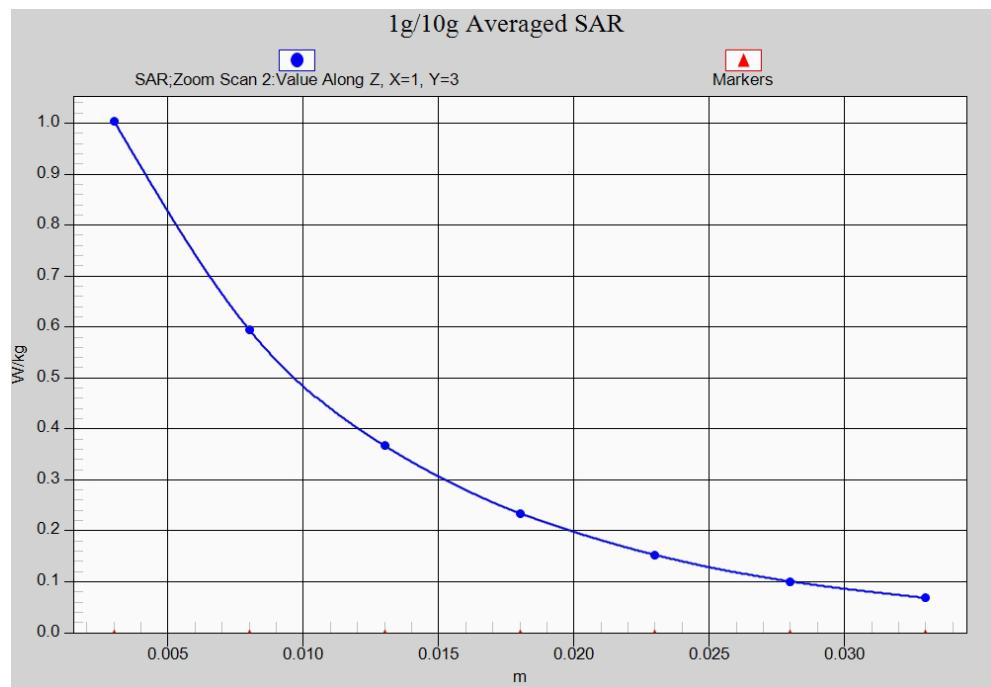


Fig. 16-1 Z-Scan at power reference point (LTE Band12)

Wifi 802.11b Left Cheek Channel 11

Date: 2016-5-6

Electronics: DAE4 Sn777

Medium: Head 2450 MHz

Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.821$ mho/m; $\epsilon_r = 38.81$; $\rho = 1000$ kg/m³

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

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

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

Area Scan (81x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.866 W/kg

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

Reference Value = 10.95 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.60 W/kg

SAR(1 g) = 0.613 W/kg; SAR(10 g) = 0.295 W/kg

Maximum value of SAR (measured) = 0.808 W/kg

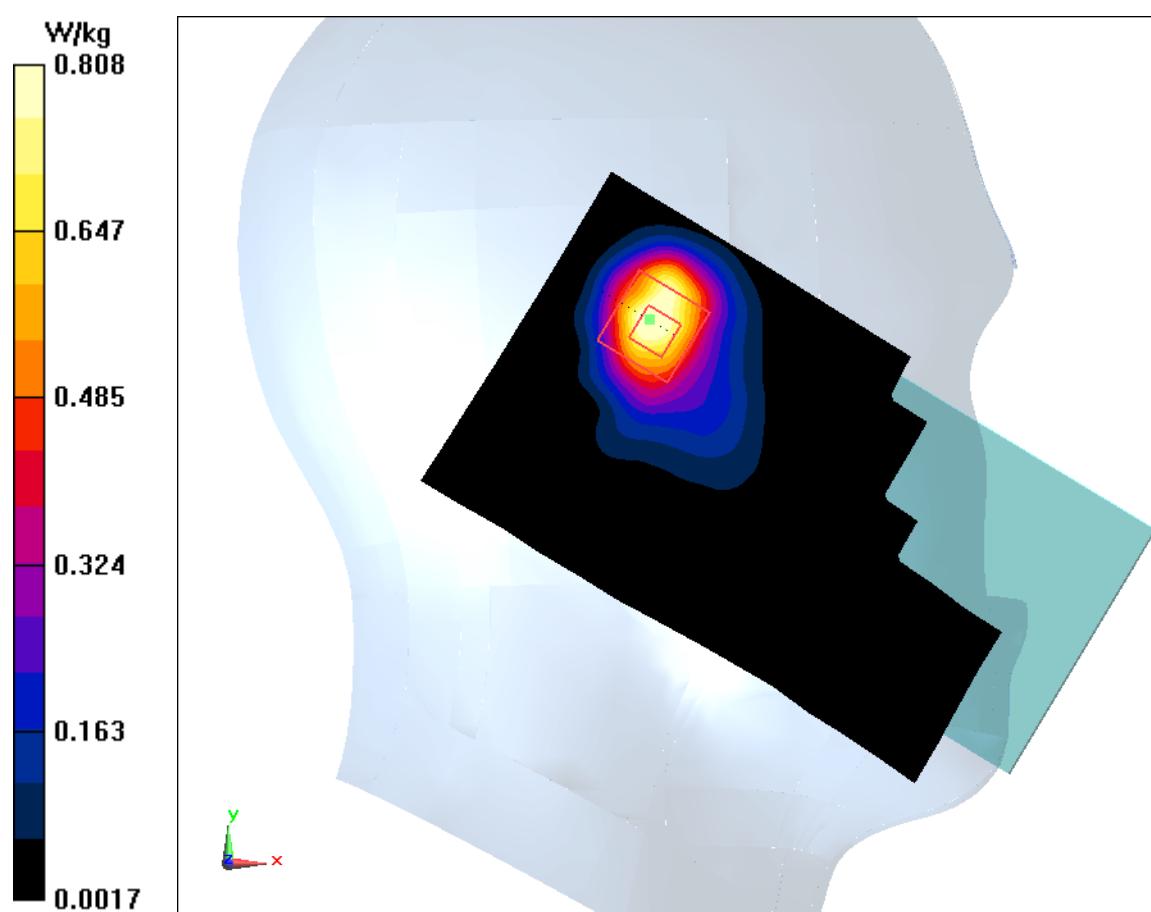


Fig.17 2450 MHz

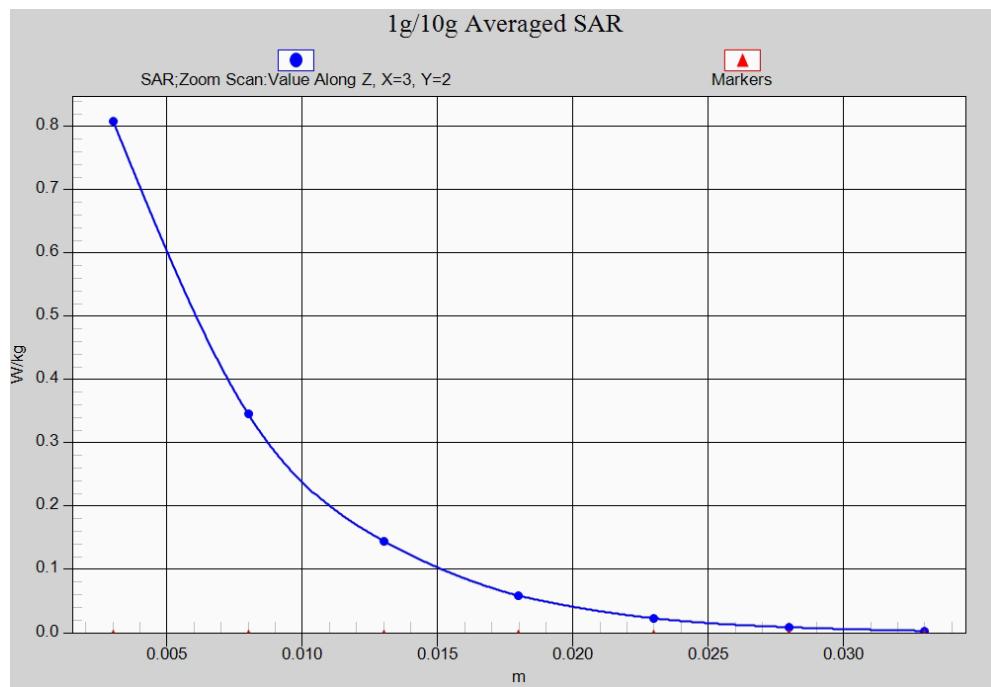


Fig. 17-1 Z-Scan at power reference point (2450 MHz)

Wifi 802.11b Body Front Channel 1

Date: 2016-5-6

Electronics: DAE4 Sn777

Medium: Body 2450 MHz

Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.911$ mho/m; $\epsilon_r = 54.57$; $\rho = 1000$ kg/m³

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

Communication System: WLan 2450 Frequency: 2412MHz Duty Cycle: 1:1

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

Area Scan (151x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.282 W/kg

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

Reference Value = 3.385 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.381 W/kg

SAR(1 g) = 0.223 W/kg; SAR(10 g) = 0.126 W/kg

Maximum value of SAR (measured) = 0.245 W/kg

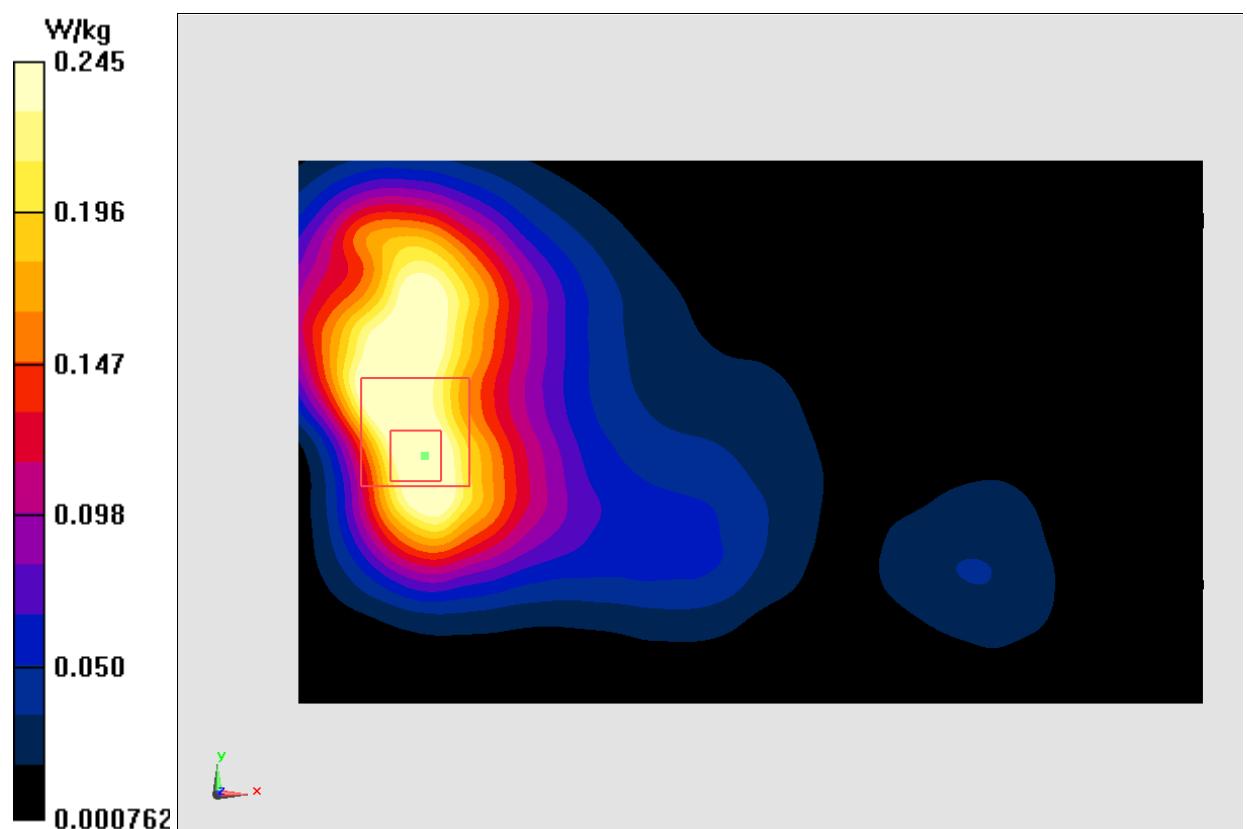


Fig.18 2450 MHz

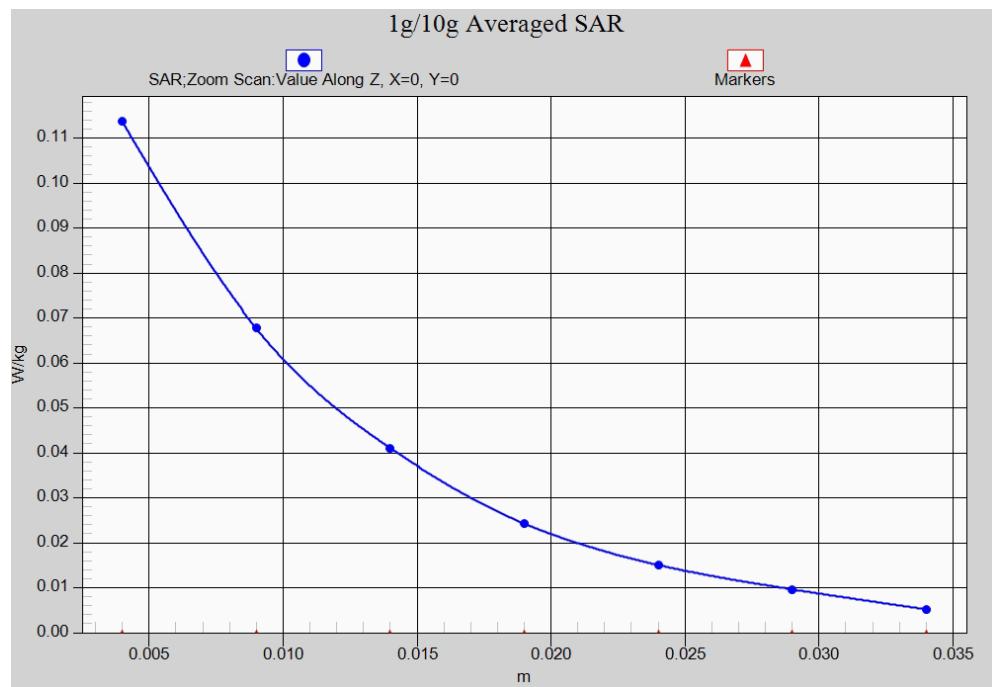


Fig. 18-1 Z-Scan at power reference point (2450 MHz)

Wifi 802.11a Left Cheek Channel 165

Date: 2016-5-8

Electronics: DAE4 Sn777

Medium: Head 5 GHz

Medium parameters used: $f = 5825$ MHz; $\sigma = 5.36$ mho/m; $\epsilon_r = 35.58$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C

Communication System: WLAN 5G Frequency: 5825 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(4.85, 4.85, 4.85)

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

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

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

Reference Value = 0 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 4.73 W/kg

SAR(1 g) = 0.762 W/kg; SAR(10 g) = 0.163 W/kg

Maximum value of SAR (measured) = 2.35 W/kg

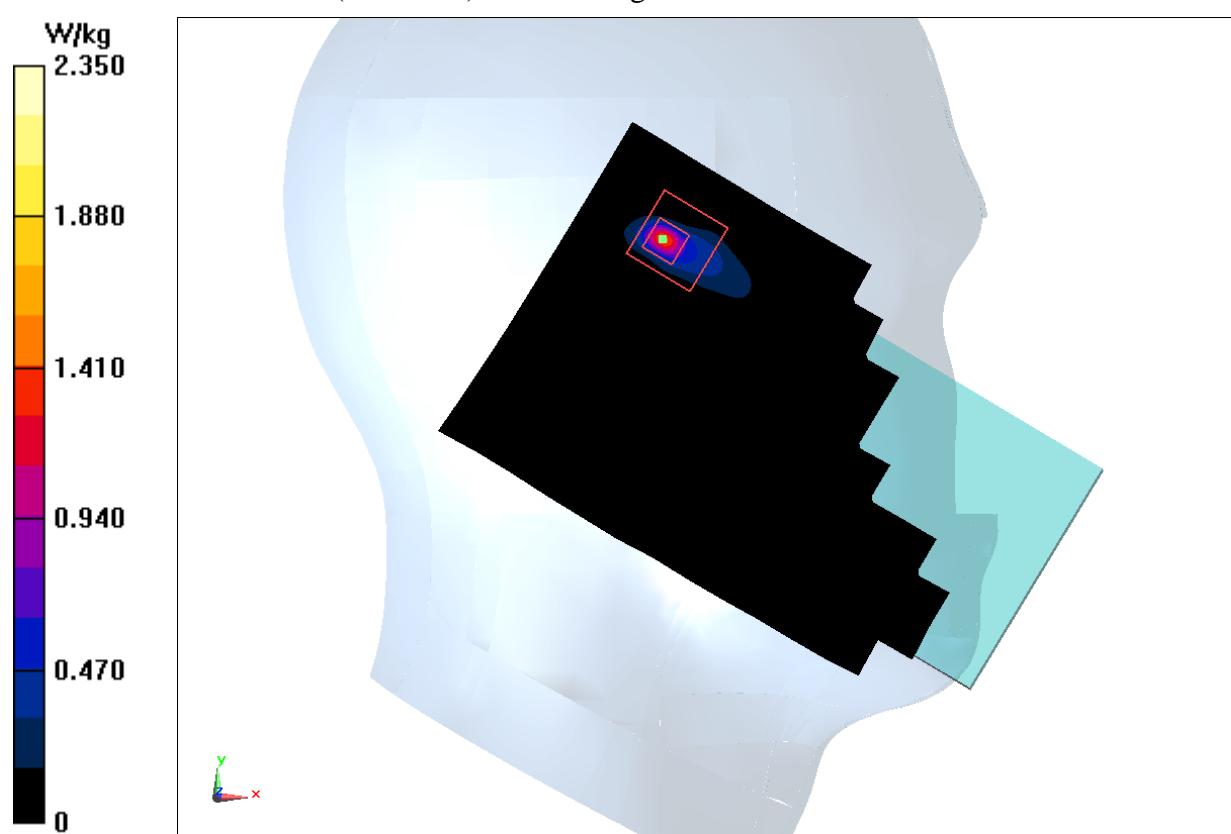


Fig.19 5GHz

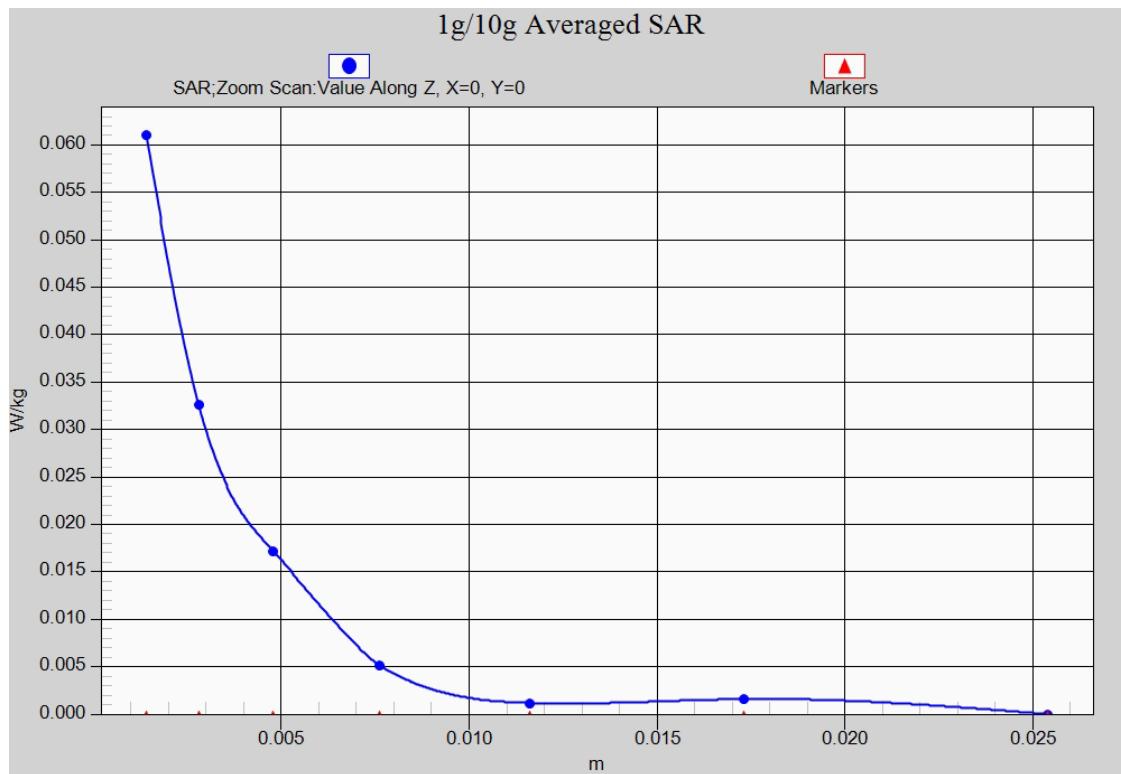


Fig. 19-1 Z-Scan at power reference point (5GHz)

Wifi 802.11a Rear Channel 165

Date: 2016-5-8

Electronics: DAE4 Sn777

Medium: Body 5 GHz

Medium parameters used: $f = 5825$ MHz; $\sigma = 6.141$ mho/m; $\epsilon_r = 49.01$; $\rho = 1000$ kg/m 3

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C

Communication System: WLAN 5G Frequency: 5825 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(4.41, 4.41, 4.41)

Area Scan (181x101x1): 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=4mm, dy=4mm, dz=1.4mm

Reference Value = 0.6020 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 3.54 W/kg

SAR(1 g) = 0.775 W/kg; SAR(10 g) = 0.259 W/kg

Maximum value of SAR (measured) = 1.93 W/kg

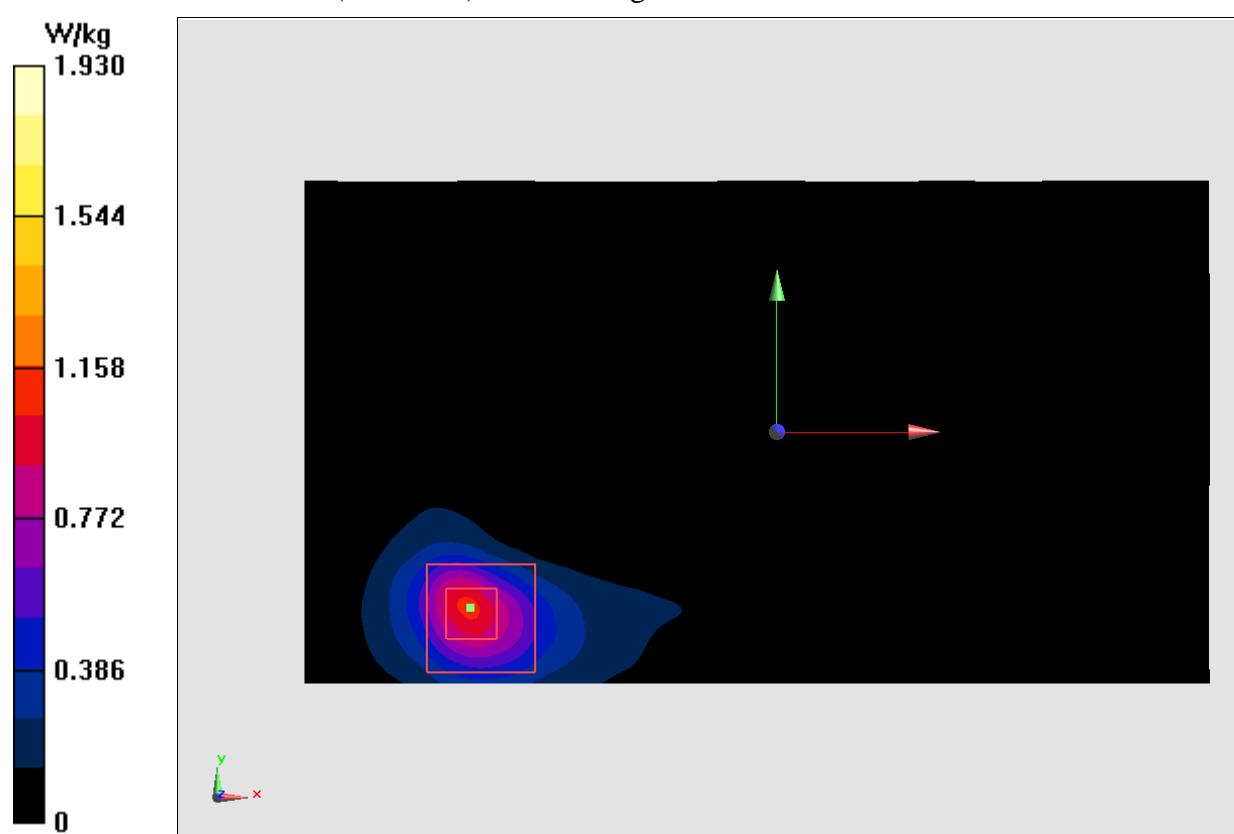


Fig.20 5GHz

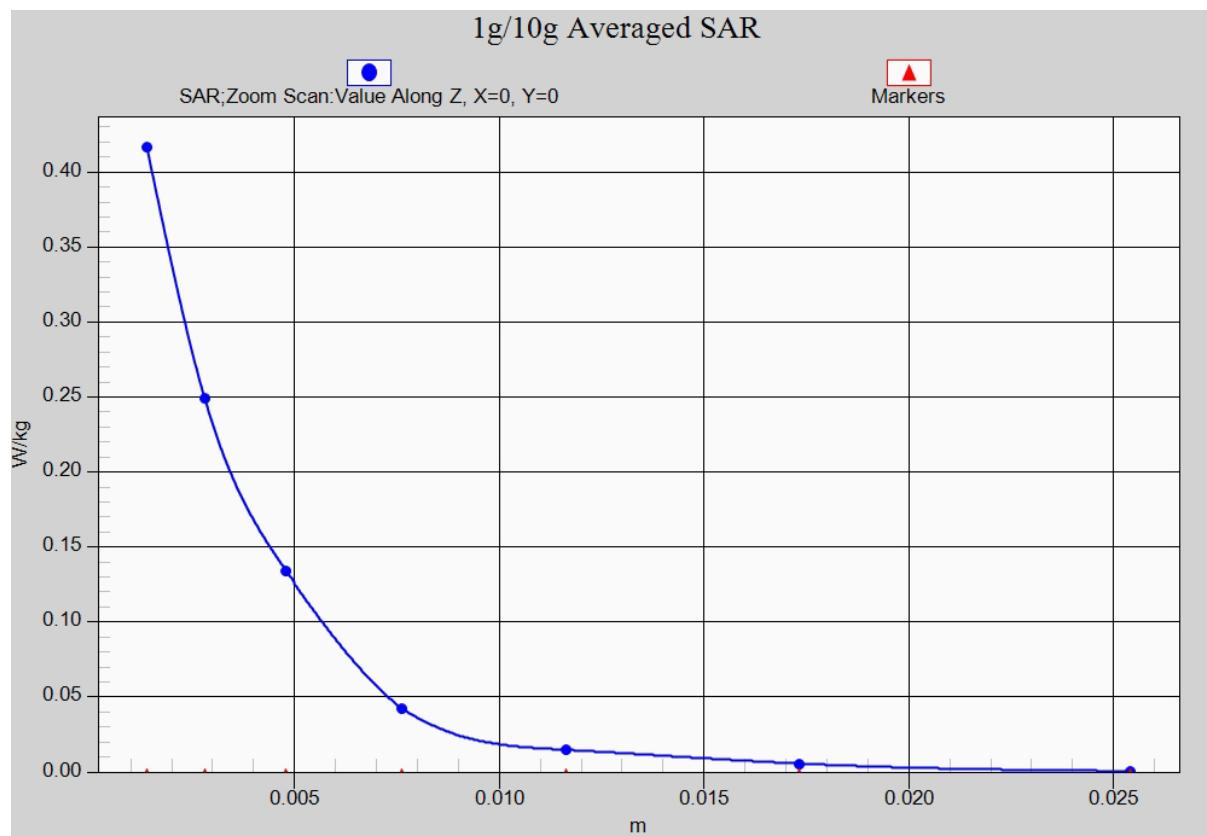


Fig. 20-1 Z-Scan at power reference point (5GHz)

ANNEX B System Verification Results

750MHz

Date: 2016-5-7

Electronics: DAE4 Sn777

Medium: Head 750 MHz

Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.915 \text{ mho/m}$; $\epsilon_r = 43.07$; $\rho = 1000 \text{ kg/m}^3$

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

Communication System: CW Frequency: 750 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(9.98, 9.98, 9.98)

System Validation /Area Scan (81x191x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 49.848 V/m; Power Drift = -0.09 dB

Fast SAR: $\text{SAR}(1 \text{ g}) = 2.08 \text{ W/kg}$; $\text{SAR}(10 \text{ g}) = 1.36 \text{ W/kg}$

Maximum value of SAR (interpolated) = 2.23 W/kg

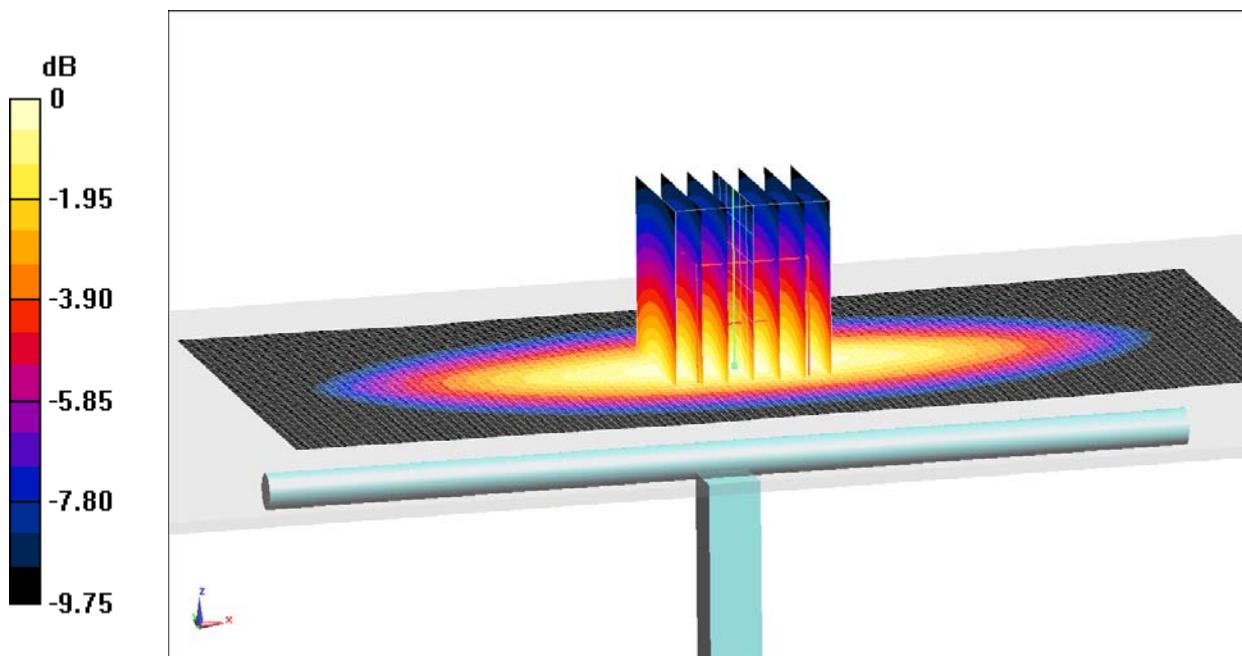
System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 49.848 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 2.88 W/kg

SAR(1 g) = 2.07 W/kg; SAR(10 g) = 1.33W/kg

Maximum value of SAR (measured) = 2.19 W/kg



$0 \text{ dB} = 2.19 \text{ W/kg} = 3.40 \text{ dB W/kg}$

Fig.B.1 validation 750MHz 250mW

750MHz

Date: 2016-5-7

Electronics: DAE4 Sn777

Medium: Body750 MHz

Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.956 \text{ mho/m}$; $\epsilon_r = 56.99$; $\rho = 1000 \text{ kg/m}^3$

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

Communication System: CW Frequency: 750 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(9.76, 9.76, 9.76)

System Validation/Area Scan (81x191x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 51.994 V/m; Power Drift = -0.06 dB

Fast SAR: $\text{SAR}(1 \text{ g}) = 2.23 \text{ W/kg}$; $\text{SAR}(10 \text{ g}) = 1.46 \text{ W/kg}$

Maximum value of SAR (interpolated) = 2.39 W/kg

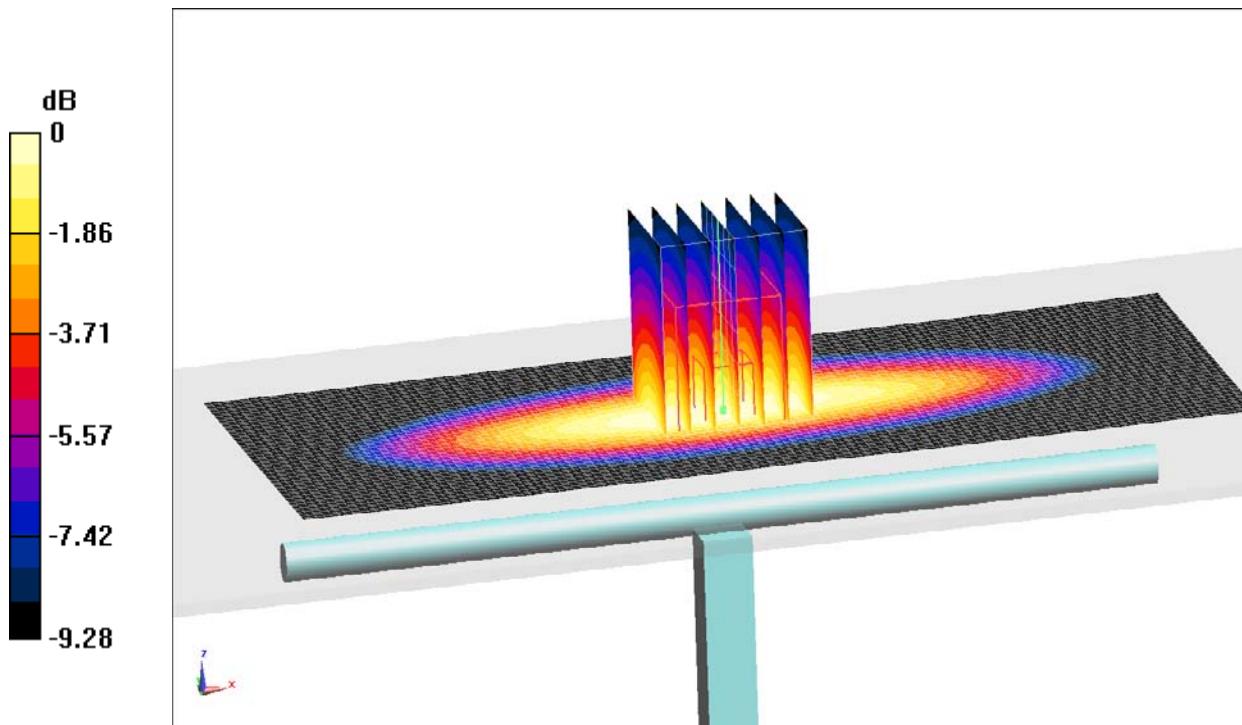
System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 51.994 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 3.06 W/kg

SAR(1 g) = 2.18 W/kg; SAR(10 g) = 1.42 W/kg

Maximum value of SAR (measured) = 2.37 W/kg



$0 \text{ dB} = 2.37 \text{ W/kg} = 3.75 \text{ dB W/kg}$

Fig.B.2 validation 750MHz 250mW

835MHz

Date: 2016-4-25

Electronics: DAE4 Sn777

Medium: Head 850 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.921 \text{ S/m}$; $\epsilon_r = 42.65$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C

Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1

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

System Validation /Area Scan (81x161x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 52.831 V/m; Power Drift = 0.09 dB

Fast SAR: $\text{SAR}(1 \text{ g}) = 2.25 \text{ W/kg}$; $\text{SAR}(10 \text{ g}) = 1.45 \text{ W/kg}$

Maximum value of SAR (interpolated) = 2.47 W/kg

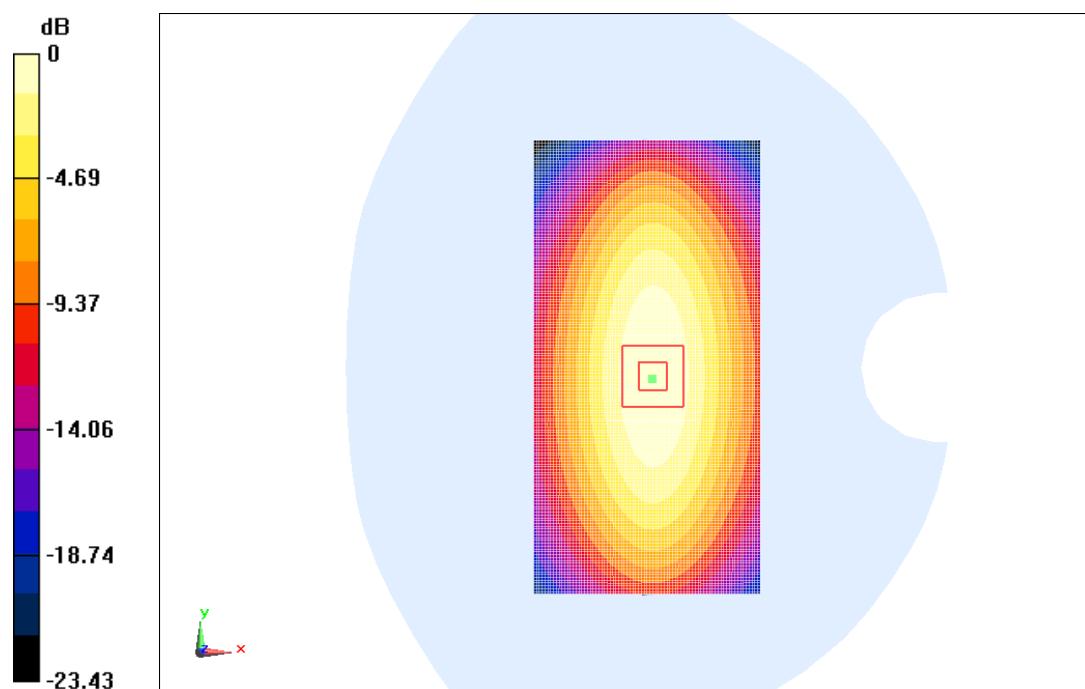
System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 52.831 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 3.53 W/kg

SAR(1 g) = 2.29 W/kg; SAR(10 g) = 1.49 W/kg

Maximum value of SAR (measured) = 2.52 W/kg



$$0 \text{ dB} = 2.52 \text{ W/kg} = 4.01 \text{ dBW/kg}$$

Fig.B.3 validation 835MHz 250mW

835MHz

Date: 2016-4-25

Electronics: DAE4 Sn777

Medium: Body 850 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.956 \text{ S/m}$; $\epsilon_r = 56.99$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C

Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1

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

System Validation /Area Scan (81x171x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 52.042 V/m; Power Drift = -0.08 dB

Fast SAR: $\text{SAR}(1 \text{ g}) = 2.36 \text{ W/kg}$; $\text{SAR}(10 \text{ g}) = 1.49 \text{ W/kg}$

Maximum value of SAR (interpolated) = 2.47 W/kg

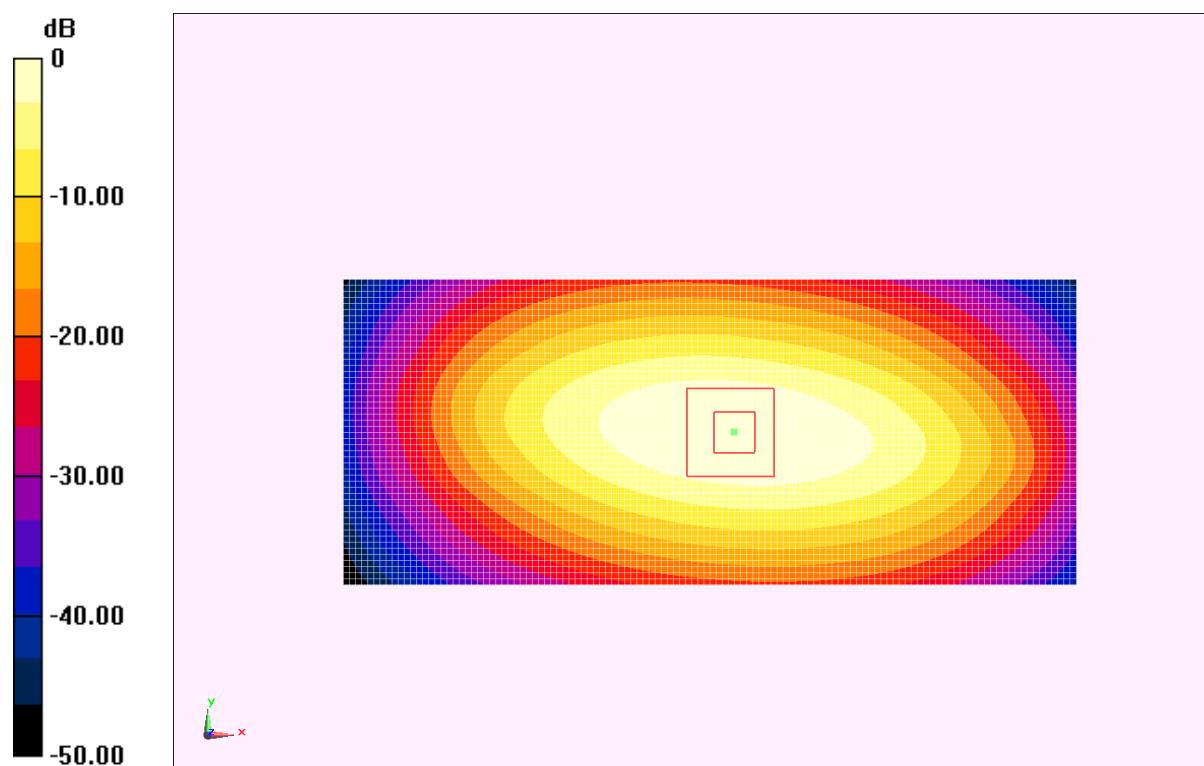
System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 52.042 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 3.46 W/kg

SAR(1 g) = 2.34 W/kg; SAR(10 g) = 1.53 W/kg

Maximum value of SAR (measured) = 2.51 W/kg



$$0 \text{ dB} = 2.51 \text{ W/kg} = 4.00 \text{ dBW/kg}$$

Fig.B.4 validation 835MHz 250mW

1750MHz

Date: 2016-4-26

Electronics: DAE4 Sn777

Medium: Head 1750 MHz

Medium parameters used: $f=1750$ MHz; $\sigma = 1.366$ mho/m; $\epsilon_r = 40.81$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C

Communication System: CW Frequency: 1750 MHz Duty Cycle: 1:1

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

System Validation/Area Scan (81x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Reference Value = 88.07 V/m; Power Drift = -0.09 dB

Fast SAR: SAR(1 g) = 9.03 W/kg; SAR(10 g) = 4.79 W/kg

Maximum value of SAR (interpolated) = 10.0 W/kg

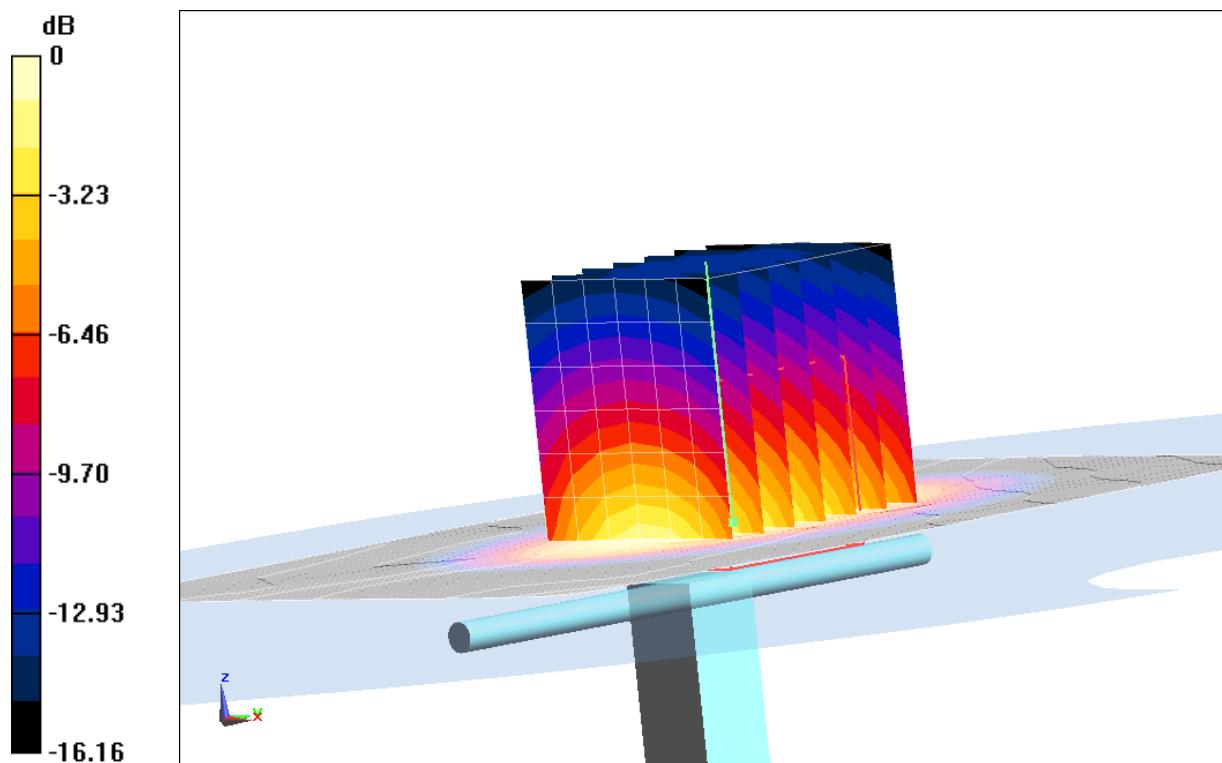
System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 88.07 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 15.64 W/kg

SAR(1 g) = 9.11 W/kg; SAR(10 g) = 4.88 W/kg

Maximum value of SAR (measured) = 10.1 W/kg



$$0 \text{ dB} = 10.1 \text{ W/kg} = 10.04 \text{ dB W/kg}$$

Fig.B.5 validation 1750MHz 250mW

1750MHz

Date: 2016-4-26

Electronics: DAE4 Sn777

Medium: Body 1750 MHz

Medium parameters used: $f=1750$ MHz; $\sigma = 1.519$ mho/m; $\epsilon_r = 54.35$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C

Communication System: CW Frequency: 1750 MHz Duty Cycle: 1:1

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

System Validation/Area Scan (81x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Reference Value = 93.509 V/m; Power Drift = 0.04 dB

Fast SAR: SAR(1 g) = 9.31 W/kg; SAR(10 g) = 5.01 W/kg

Maximum value of SAR (interpolated) = 10.2 W/kg

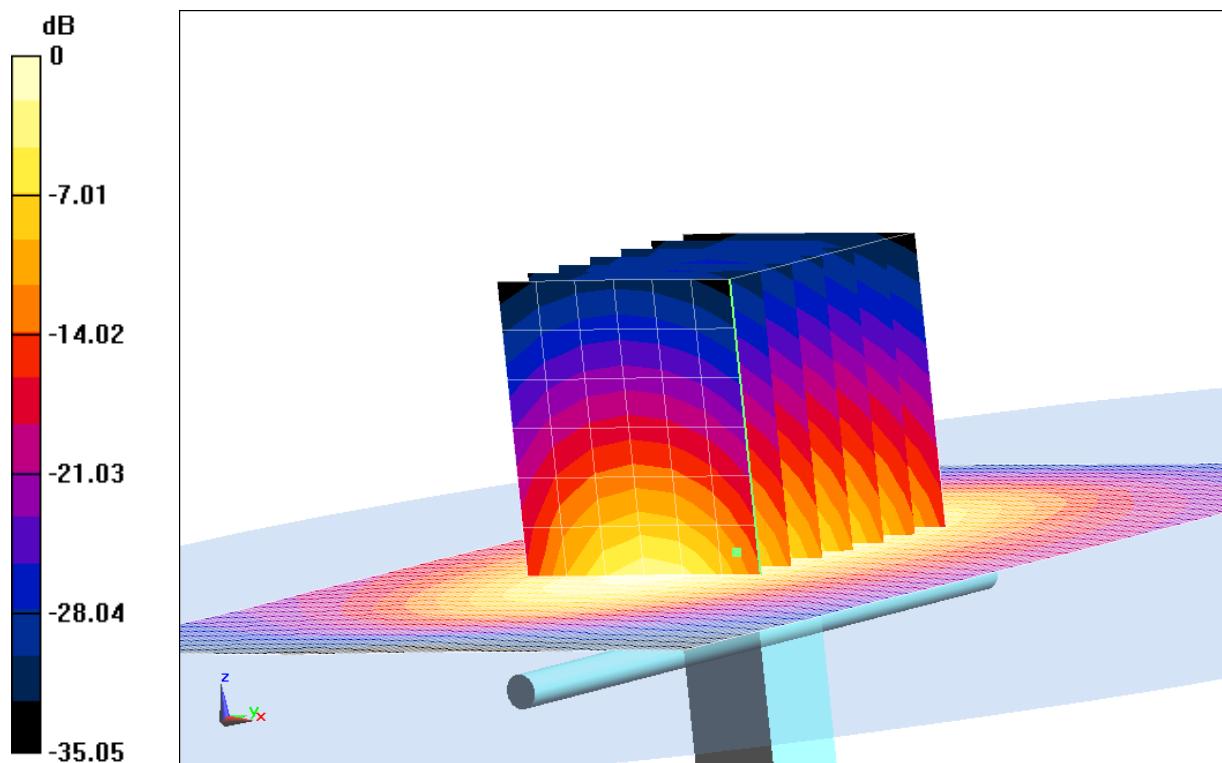
System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 93.509 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 16.16 W/kg

SAR(1 g) = 9.36 W/kg; SAR(10 g) = 5.03 W/kg

Maximum value of SAR (measured) = 10.1 W/kg



$$0 \text{ dB} = 10.1 \text{ W/kg} = 10.04 \text{ dB W/kg}$$

Fig.B.6 validation 1750MHz 250mW

1900MHz

Date: 2016-5-5

Electronics: DAE4 Sn777

Medium: Head 1900 MHz

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.421 \text{ S/m}$; $\epsilon_r = 39.15$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C

Communication System: CW Frequency: 1900 MHz Duty Cycle: 1:1

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

System Validation /Area Scan (81x121x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 93.622 V/m; Power Drift = 0.05 dB

Fast SAR: $\text{SAR}(1 \text{ g}) = 10.41 \text{ W/kg}$; $\text{SAR}(10 \text{ g}) = 5.50 \text{ W/kg}$

Maximum value of SAR (interpolated) = 11.96 W/kg

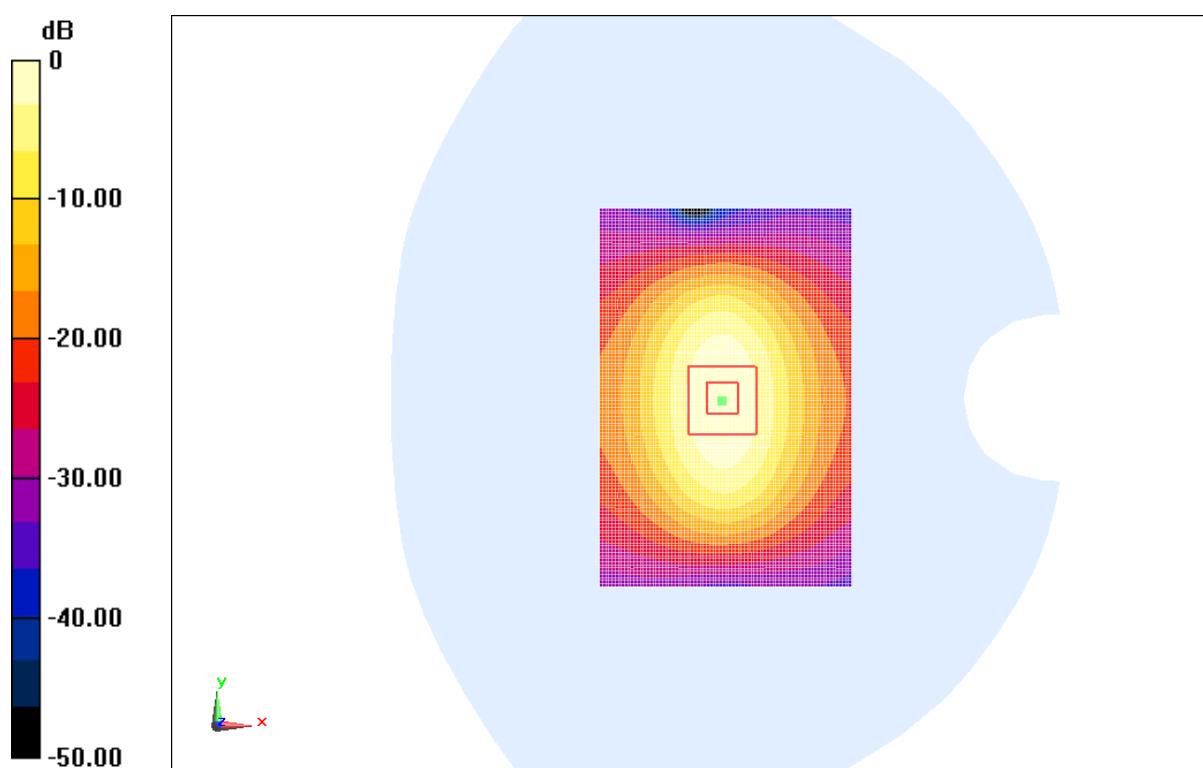
System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 93.622 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 18.89 W/kg

SAR(1 g) = 10.38 W/kg; SAR(10 g) = 5.38W/kg

Maximum value of SAR (measured) = 11.78 W/kg



$$0 \text{ dB} = 11.78 \text{ W/kg} = 10.71 \text{ dBW/kg}$$

Fig.B.7 validation 1900MHz 250mW

1900MHz

Date: 2016-5-5

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.542 \text{ S/m}$; $\epsilon_r = 52.12$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C

Communication System: CW Frequency: 1900 MHz Duty Cycle: 1:1

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

System validation /Area Scan (81x121x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 58.758 V/m; Power Drift = -0.02 dB

Fast SAR: $\text{SAR}(1 \text{ g}) = 10.21 \text{ W/kg}$; $\text{SAR}(10 \text{ g}) = 5.40 \text{ W/kg}$

Maximum value of SAR (interpolated) = 12.44 W/kg

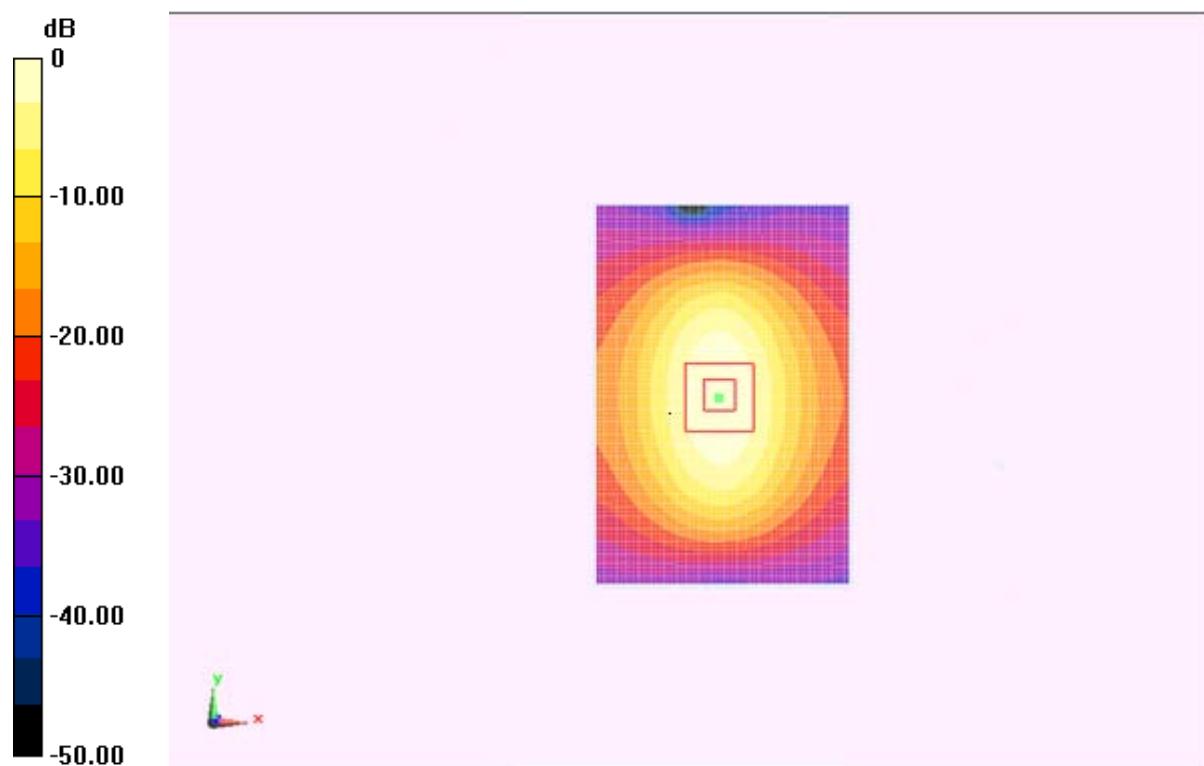
System validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 58.758 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 19.11 W/kg

SAR(1 g) = 10.14 W/kg; SAR(10 g) = 5.38 W/kg

Maximum value of SAR (measured) = 12.28 W/kg



$$0 \text{ dB} = 12.28 \text{ W/kg} = 10.89 \text{ dBW/kg}$$

Fig.B.8 validation 1900MHz 250mW

2450MHz

Date: 2016-5-6

Electronics: DAE4 Sn777

Medium: Head 2450 MHz

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.815 \text{ mho/m}$; $\epsilon_r = 38.86$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C

Communication System: CW Frequency: 2450 MHz Duty Cycle: 1:1

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

System Validation /Area Scan (61x81x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 90.13 V/m; Power Drift = -0.02 dB

SAR(1 g) = 13.32 W/kg; SAR(10 g) = 6.36 W/kg

Maximum value of SAR (interpolated) = 17.1 W/kg

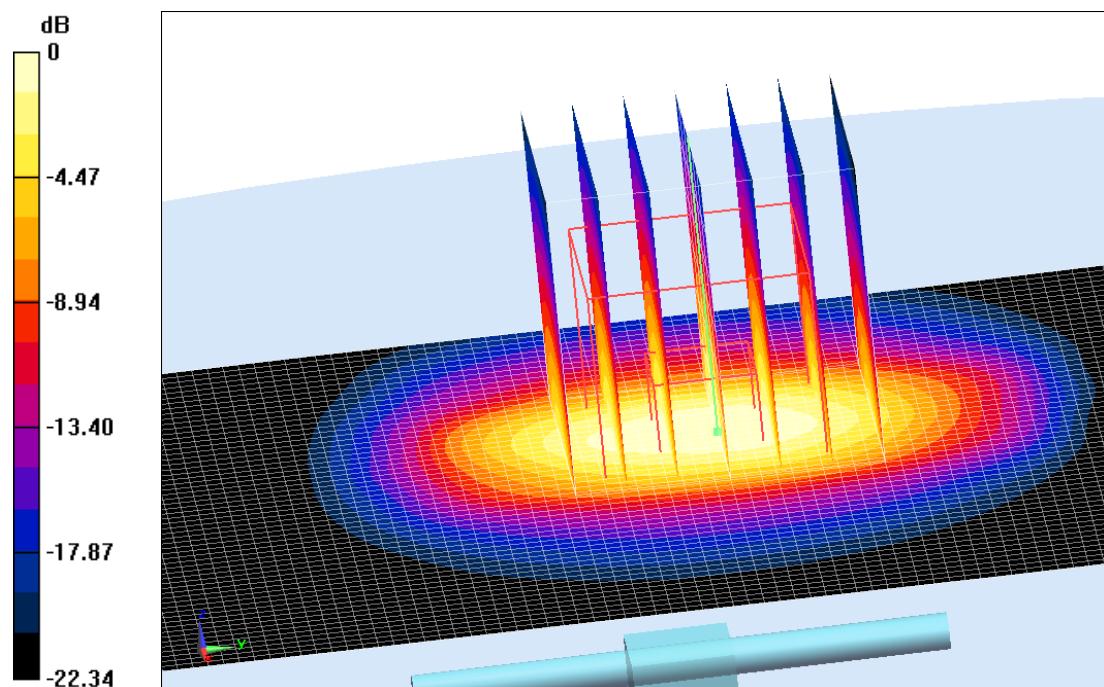
System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 90.13 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 27.37 W/kg

SAR(1 g) = 13.29 W/kg; SAR(10 g) = 6.27 W/kg

Maximum value of SAR (measured) = 16.55 W/kg



$$0 \text{ dB} = 16.55 \text{ W/kg} = 12.19 \text{ dBW/kg}$$

Fig.B.9 validation 2450MHz 250mW

2450MHz

Date: 2016-5-6

Electronics: DAE4 Sn777

Medium: Body 2450 MHz

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.978 \text{ S/m}$; $\epsilon_r = 53.58$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C

Communication System: CW Frequency: 2450 MHz Duty Cycle: 1:1

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

System Validation/Area Scan (81x101x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 88.931 V/m; Power Drift = 0.05 dB

SAR(1 g) = 12.67 W/kg; SAR(10 g) = 6.15 W/kg

Maximum value of SAR (interpolated) = 14.2 W/kg

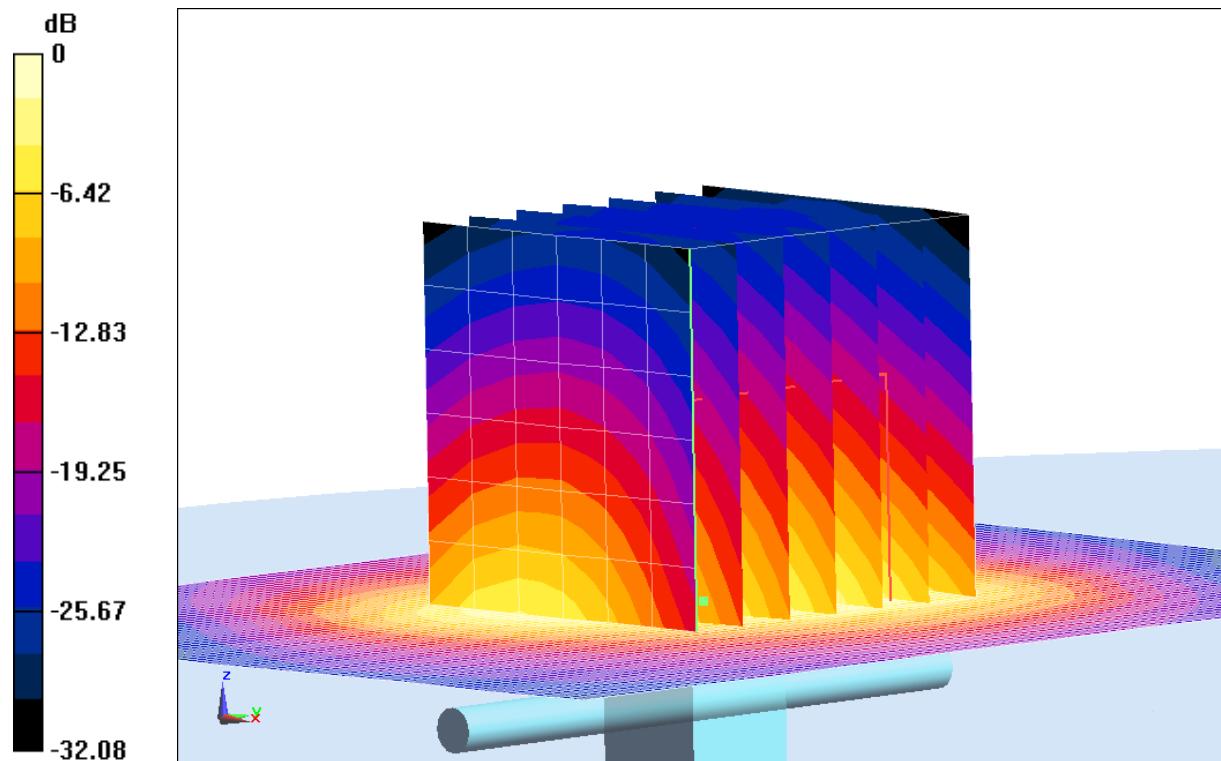
System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 88.931 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 24.62 W/kg

SAR(1 g) = 12.64 W/kg; SAR(10 g) = 6.11 W/kg

Maximum value of SAR (measured) = 14.39 W/kg



$$0 \text{ dB} = 14.39 \text{ W/kg} = 11.58 \text{ dB W/kg}$$

Fig.B.10 validation 2450MHz 250mW

5200MHz

Date: 2016-5-8

Electronics: DAE4 Sn777

Medium: Head 5200 MHz

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 4.658 \text{ mho/m}$; $\epsilon_r = 36.74$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C

Communication System: CW Frequency: 5200 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(5.46, 5.46, 5.46)

System Validation /Area Scan (91x91x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
Maximum value of SAR (interpolated) = 9.77 W/kg

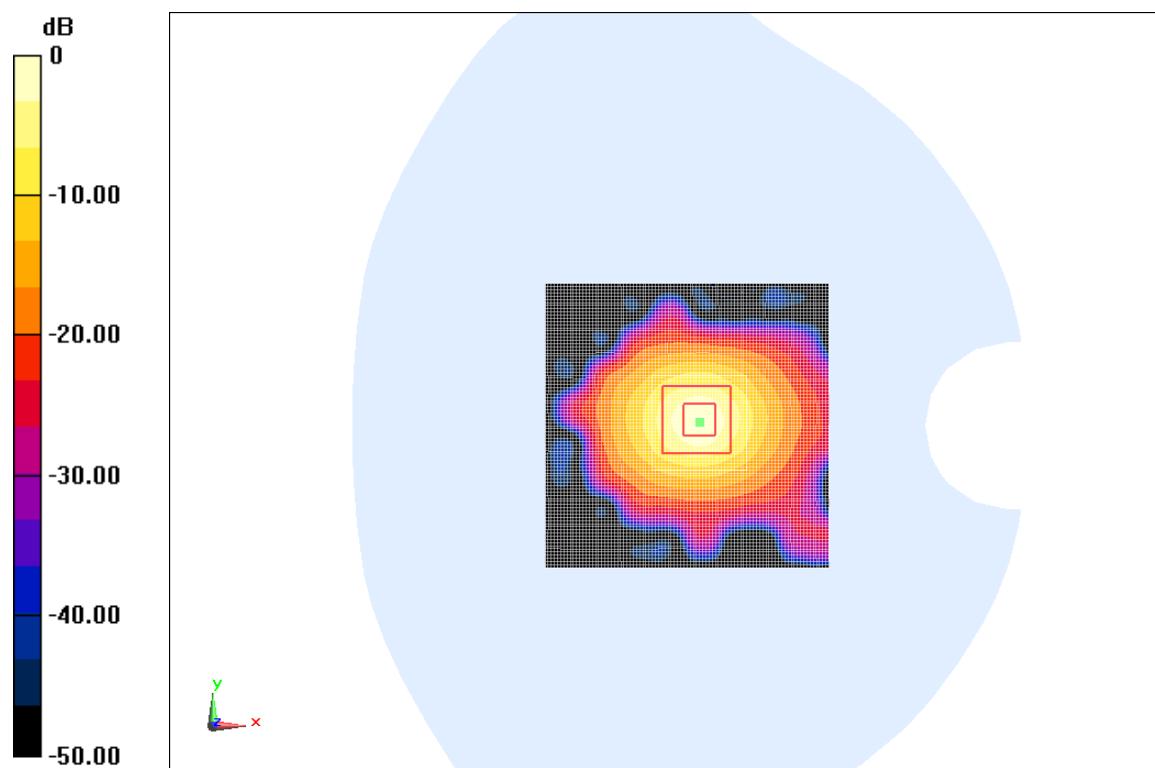
System Validation /Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=4\text{mm}$

Reference Value = 61.397 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 34.97 W/kg

SAR(1 g) = 8.05 W/kg; SAR(10 g) = 2.29 W/kg

Maximum value of SAR (measured) = 9.82 W/kg



$0 \text{ dB} = 9.82 \text{ W/kg} = 9.92 \text{ dB W/kg}$

Fig.B.11 validation 5200MHz 100mW

5200MHz

Date: 2016-5-8

Electronics: DAE4 Sn777

Medium: Body 5200 MHz

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.158 \text{ mho/m}$; $\epsilon_r = 50.58$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C

Communication System: CW Frequency: 5200 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(4.88, 4.88, 4.88)

System Validation /Area Scan (91x91x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
Maximum value of SAR (interpolated) = 9.1 W/kg

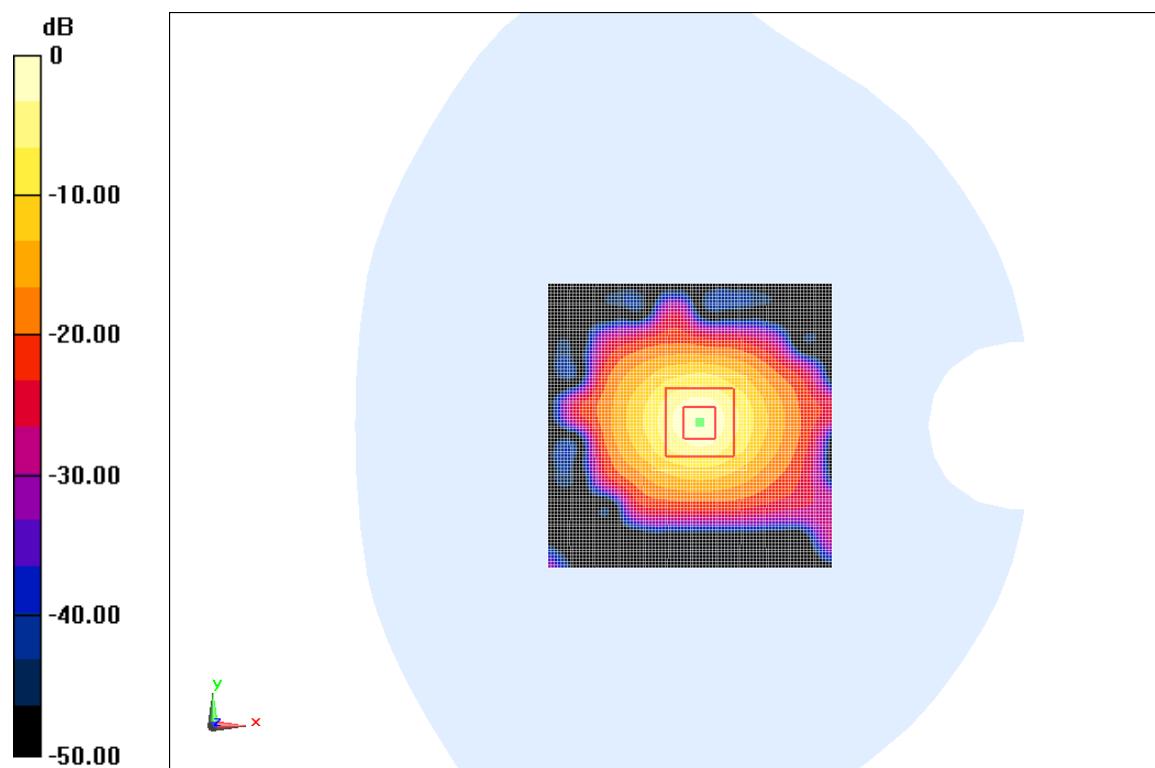
System Validation /Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=4\text{mm}$

Reference Value = 60.603 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 33.42 W/kg

SAR(1 g) = 7.54 W/kg; SAR(10 g) = 2.17 W/kg

Maximum value of SAR (measured) = 9.19 W/kg



$$0 \text{ dB} = 9.19 \text{ W/kg} = 9.63 \text{ dB W/kg}$$

Fig.B.12 validation 5200MHz 100mW

5300MHz

Date: 2016-5-8

Electronics: DAE4 Sn777

Medium: Head 5300 MHz

Medium parameters used: $f = 5300 \text{ MHz}$; $\sigma = 4.772 \text{ mho/m}$; $\epsilon_r = 36.69$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C

Communication System: CW Frequency: 5300 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(5.28, 5.28, 5.28)

System Validation /Area Scan (91x91x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
Maximum value of SAR (interpolated) = 9.78 W/kg

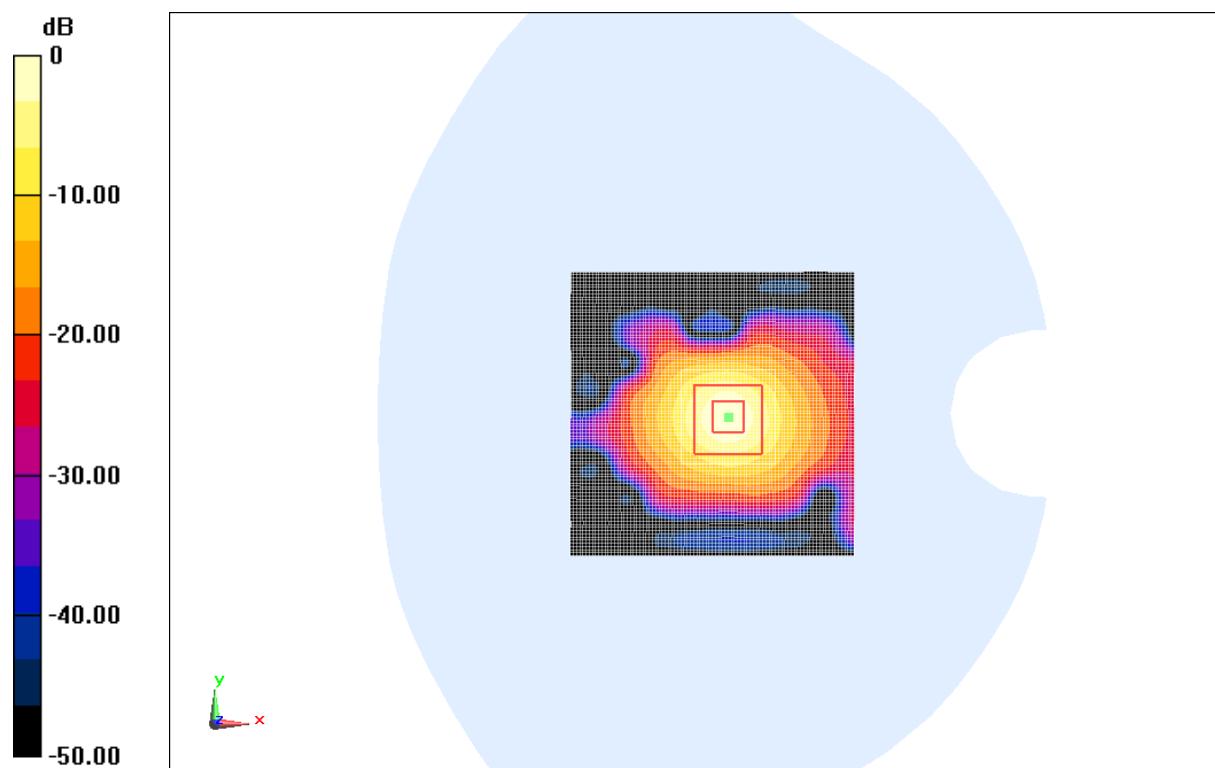
System Validation /Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=4\text{mm}$

Reference Value = 62.356 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 34.93 W/kg

SAR(1 g) = 8.05 W/kg; SAR(10 g) = 2.39 W/kg

Maximum value of SAR (measured) = 9.82 W/kg



0 dB = 9.82 W/kg = 9.93 dB W/kg

Fig.B.13 validation 5300MHz 100mW

5300MHz

Date: 2016-5-8

Electronics: DAE4 Sn777

Medium: Body 5300 MHz

Medium parameters used: $f = 5300 \text{ MHz}$; $\sigma = 5.325 \text{ mho/m}$; $\epsilon_r = 50.28$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C

Communication System: CW Frequency: 5300 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(4.69, 4.69, 4.69)

System Validation /Area Scan (91x91x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
Maximum value of SAR (interpolated) = 9.19 W/kg

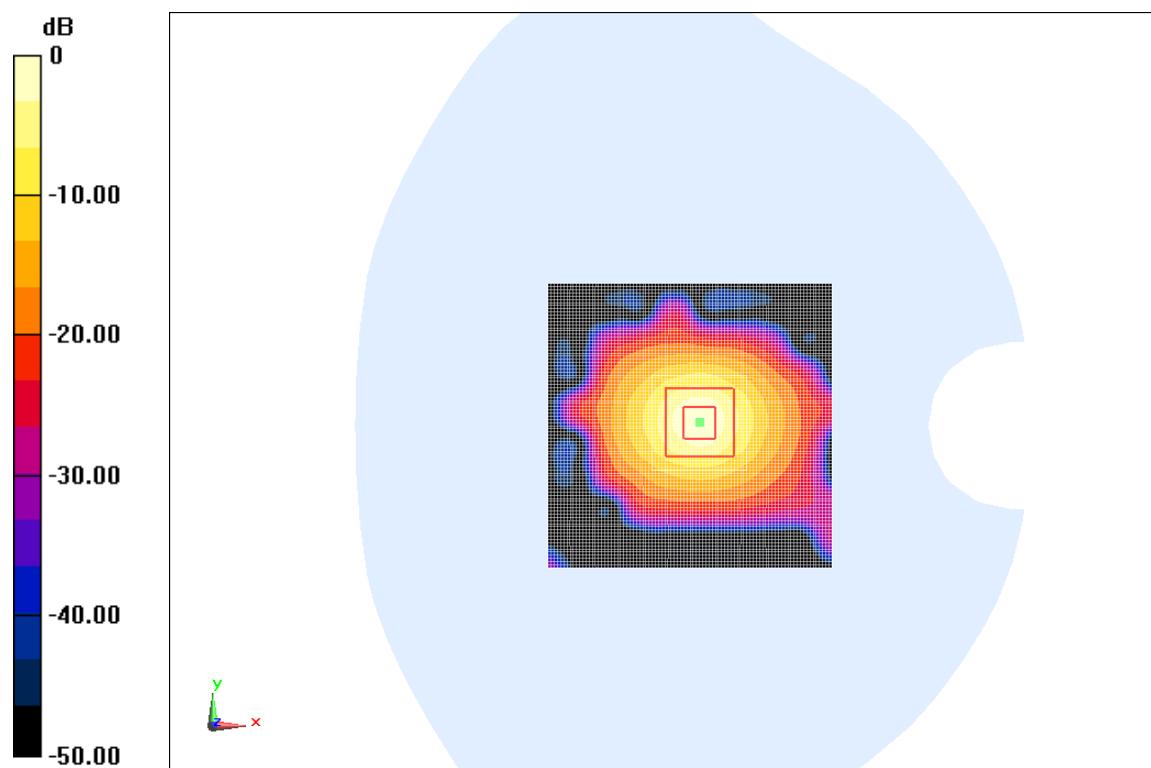
System Validation /Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=4\text{mm}$

Reference Value = 63.211 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 33.43 W/kg

SAR(1 g) = 7.48 W/kg; SAR(10 g) = 2.18 W/kg

Maximum value of SAR (measured) = 9.27 W/kg



$0 \text{ dB} = 9.27 \text{ W/kg} = 9.68 \text{ dB W/kg}$

Fig.B.14 validation 5300MHz 100mW

5600MHz

Date: 2016-5-8

Electronics: DAE4 Sn777

Medium: Head 5600 MHz

Medium parameters used: $f = 5600 \text{ MHz}$; $\sigma = 5.127 \text{ mho/m}$; $\epsilon_r = 35.99$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C

Communication System: CW Frequency: 5600 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(4.75, 4.75, 4.75)

System Validation /Area Scan (91x91x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
Maximum value of SAR (interpolated) = 10.1 W/kg

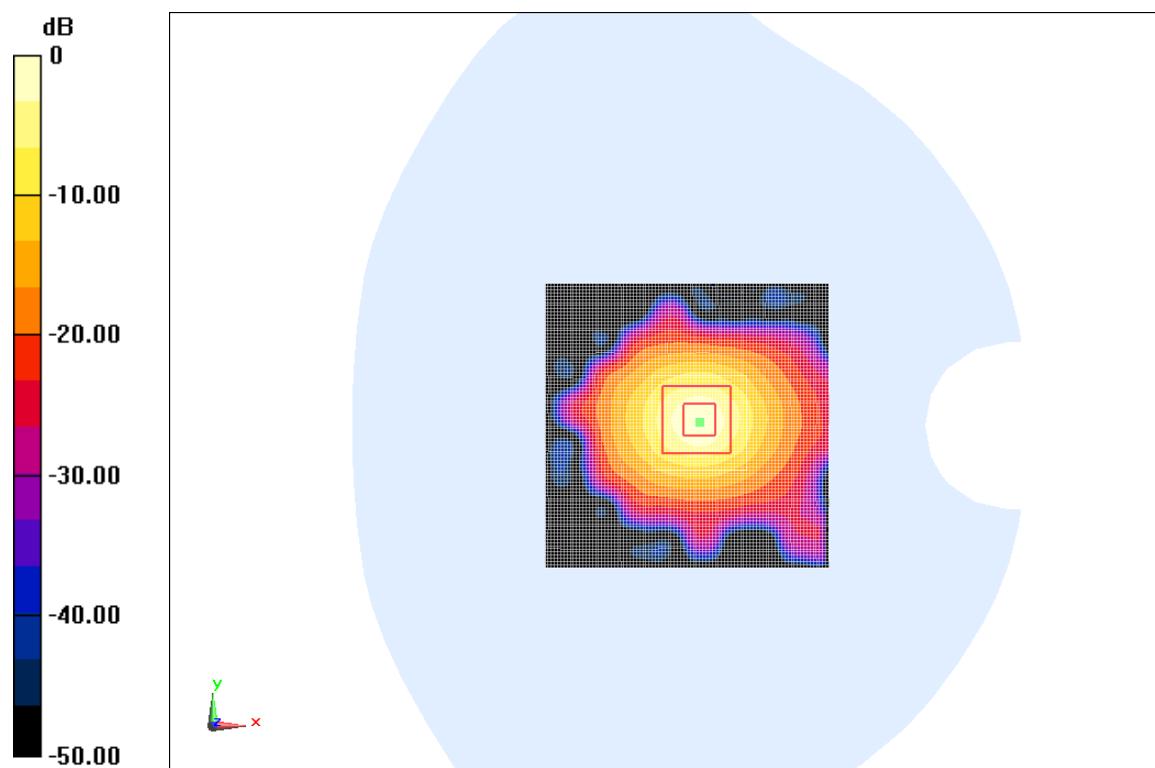
System Validation /Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=4\text{mm}$

Reference Value = 62.111 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 35.12 W/kg

SAR(1 g) = 8.20 W/kg; SAR(10 g) = 2.42 W/kg

Maximum value of SAR (measured) = 10.1 W/kg



$$0 \text{ dB} = 10.1 \text{ W/kg} = 10.04 \text{ dB W/kg}$$

Fig.B.15 validation 5600MHz 100mW

5600MHz

Date: 2016-5-8

Electronics: DAE4 Sn777

Medium: Body 5600 MHz

Medium parameters used: $f = 5600 \text{ MHz}$; $\sigma = 5.741 \text{ mho/m}$; $\epsilon_r = 49.58$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C

Communication System: CW Frequency: 5600 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(4.27, 4.27, 4.27)

System Validation /Area Scan (91x91x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
Maximum value of SAR (interpolated) = 9.87 W/kg

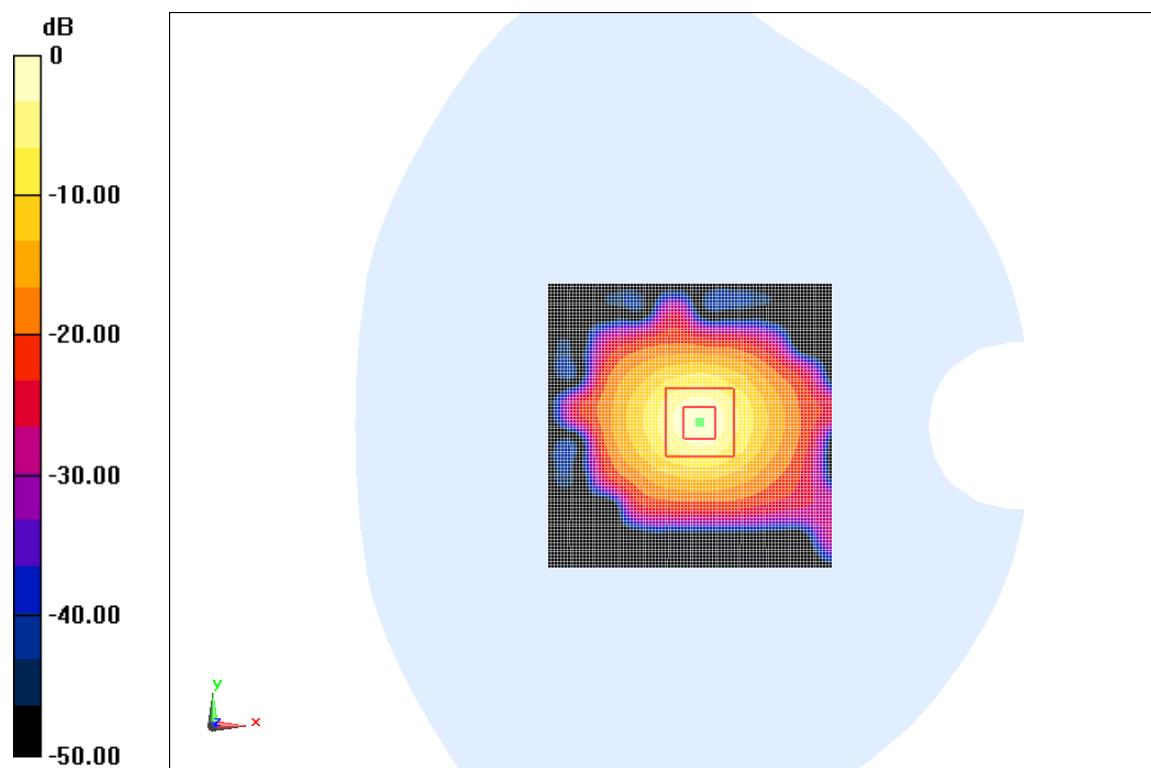
System Validation /Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=4\text{mm}$

Reference Value = 63.191 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 34.17 W/kg

SAR(1 g) = 8.15 W/kg; SAR(10 g) = 2.26 W/kg

Maximum value of SAR (measured) = 9.91 W/kg



0 dB = 9.91 W/kg = 9.96 dB W/kg

Fig.B.16 validation 5600MHz 100mW