NOTES:

1) Division Factors

To average the power, the division factor is as follows:

1TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

3TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

According to the conducted power as above, the body measurements are performed with 2Txslots for GSM850 and 3Txslots for PCS1900.

11.3 WCDMA Measurement result

Table 11.8: The conducted Power for WCDMA850/1900

Item	band	FDDV result		
	ARFCN	4233(846.6MHz)	4182(836.4MHz)	4132(826.4MHz)
WCDMA	\	22.63	22.77	22.41
HSUPA	1	19.33	20.06	19.15
	2	19.32	19.55	19.11
	3	20.27	20.54	20.11
	4	18.78	19.00	18.55
	5	21.27	21.48	21.05
Item	band	FDDII result		
	ARFCN	9538(1907.6MHz)	9400(1880MHz)	9262(1852.4MHz)
WCDMA	\	22.29	22.51	22.64
HSUPA	1	19.08	19.32	19.39
	2	19.07	19.30	19.37
	3	20.08	20.28	20.41
	4	18.51	18.76	18.82
	5	21.07	21.33	21.38
Item	band	FDDIV result		
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)
WCDMA	\	22.35	22.46	22.54
HSUPA	1	19.78	19.30	19.35
	2	19.25	19.30	19.33
	3	20.23	20.29	20.33
	4	18.76	18.76	18.80
	5	21.25	21.26	21.33

11.4 Wi-Fi and BT Measurement result

The output power of BT antenna is as following:

Mode	Conducted Power (dBm)		
	Channel 0 (2402MHz)	Channel 39 (2441MHz)	Channel 78(2480MHz)
GFSK	4.00	4.68	4.43
EDR2M-4_DQPSK	3.25	3.96	3.64
EDR3M-8DPSK	3.25	3.96	3.61

The average conducted power for Wi-Fi is as following:

802.11b（dBm）

Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps
1	15.59	/	15.84	/
6	15.88	/	16.23	/
11	16.59	16.33	16.74	16.47

802.11g（dBm）

Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
1	11.81	/	/	/	/	/	/	/
6	11.95	/	/	/	/	/	/	/
11	12.51	12.29	12.25	12.17	12.05	11.86	11.70	11.66

802.11n（dBm）- HT20 (2.4G)

Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
1	10.86	/	/	/	/	/	/	/
6	11.10	/	/	/	/	/	/	/
11	11.52	11.42	11.35	11.24	11.05	10.77	10.73	10.66

802.11n（dBm）- HT40 (2.4G)

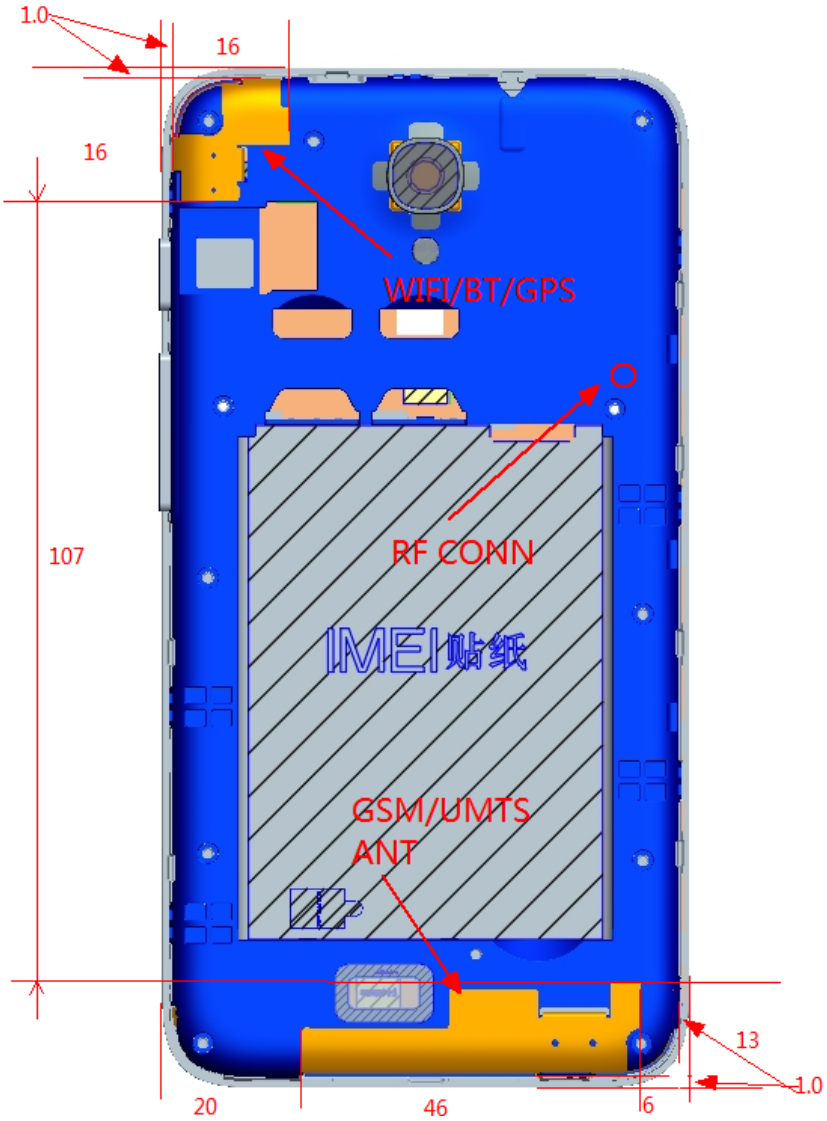
Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
3	11.04	/	/	/	/	/	/	/
6	11.10	/	/	/	/	/	/	/
9	11.63	11.50	11.34	11.21	10.90	10.74	10.34	10.17

12 Simultaneous TX SAR Considerations

12.1 Introduction

The following procedures adopted from “FCC SAR Considerations for Cell Phones with Multiple Transmitters” are applicable to handsets with built-in unlicensed transmitters such as 802.11 a/b/g and Bluetooth devices which may simultaneously transmit with the licensed transmitter.
For this device, the BT and Wi-Fi can transmit simultaneous with other transmitters.

12.2 Transmit Antenna Separation Distances



Picture 12.1 Antenna Locations

12.3 SAR Measurement Positions

According to the KDB941225 D06 Hot Spot SAR v01, the edges with less than 2.5 cm distance to the antennas need to be tested for SAR.

SAR measurement positions						
Mode	Front	Rear	Left edge	Right edge	Top edge	Bottom edge
Main antenna	Yes	Yes	Yes	Yes	No	Yes
WLAN	Yes	Yes	No	Yes	Yes	No

12.4 Standalone SAR Test Exclusion Considerations

Standalone 1-g head or body SAR evaluation by measurement or numerical simulation is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied. The 1-g SAR test exclusion threshold for 100 MHz to 6 GHz at test separation distances≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

Table 12.1: Standalone SAR test exclusion considerations

Band/Mode	F(GHz)	Position	SAR test exclusion threshold(mW)	RF output power		SAR test exclusion
				dBm	mW	
Bluetooth	2.441	Head	9.60	5	3.16	Yes
		Body	19.20	5	3.16	Yes
2.4GHz WLAN 802.11 b	2.45	Head	9.58	17	50.12	No
		Body	19.17	17	50.12	No

13 Evaluation of Simultaneous

Table 13.1: The sum of reported SAR values for main antenna and WiFi

	Position	Main antenna	WiFi	Sum
Highest reported SAR value for Head	Left hand, Touch cheek	0.42	0.07	**0.49**
	Right hand, Touch cheek	0.48	0.04	**0.52**
Highest reported SAR value for Body	Rear	0.96	0.05	**1.01**

Table 13.2: The sum of reported SAR values for main antenna and Bluetooth

	Position	Main antenna	BT*	Sum
Highest reported SAR value for Head	Right hand, Touch cheek	0.48	0.13	**0.61**
Highest reported SAR value for Body	Rear	0.96	0.07	**1.03**

BT* - Estimated SAR for Bluetooth (see the table 13.3)

Table 13.3: Estimated SAR for Bluetooth

Position	F (GHz)	Distance (mm)	Upper limit of power *		Estimated$_{1g}$ (W/kg)
			dBm	mW	
Head	2.441	5	5	3.16	0.13
Body	2.441	10	5	3.16	0.07

* - Maximum possible output power declared by manufacturer

When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:
(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)]·[√f(GHz)/x] W/kg for test separation distances ≤ 50 mm;
where x = 7.5 for 1-g SAR.
When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

Conclusion:
According to the above tables, the sum of reported SAR values is<1.6W/kg. So the simultaneous transmission SAR with volume scans is not required.

14 SAR Test Result

It is determined by user manual for the distance between the EUT and the phantom bottom.
The distance is 10mm and just applied to the condition of body worn accessory.
It is performed for all SAR measurements with area scan based 1-g SAR estimation (Fast SAR). A zoom scan measurement is added when the estimated 1-gSAR is the highest measured SAR in each exposure configuration, wireless mode and frequency band combination or >1.2W/kg.
The calculated SAR is obtained by the following formula:

$$\text{Reported SAR} = \text{Measured SAR} \times 10^{(P_{Target} - P_{Measured})/10}$$

Where P_{Target} is the power of manufacturing upper limit;
$P_{Measured}$ is the measured power in chapter 11.

Table 14.1: Duty Cycle

Mode	Duty Cycle
Speech for GSM850/1900	1:8.3
GPRS&EGPRS for GSM850	1:4
GPRS&EGPRS for PCS1900	1:2.67
WCDMA850/1900	1:1

14.1 The evaluation of multi-batteries

We'll perform the head measurement in all bands with the primary battery depending on the evaluation of multi-batteries and retest on highest value point with other batteries. Then, repeat the measurement in the Body test.

Table 14.1-1: The evaluation of multi-batteries for Head Test

Frequency		Mode/Band	Side	Test Position	Battery Type	SAR(1g)	Power Drift(dB)
MHz	Ch.					(W/kg)	
848.8	251	GSM850	Right	Touch	CAB2000041C7 (711700096011)	0.451	0.03
848.8	251	GSM850	Right	Touch	CAB2000010C1	0.464	-0.15

Note: According to the values in the above table, the battery, CAB2000010C1, is the primary battery. We'll perform the head measurement with this battery and retest on highest value point with others.

Table 14.1-2: The evaluation of multi-batteries for Body Test

Frequency		Mode/Band	Test Position	Spacing (mm)	Battery Type	SAR(1g)	Power Drift(dB)
MHz	Ch.					(W/kg)	
836.6	190	GSM850	Rear	10	CAB2000041C7 (711700096011)	0.853	0.09
836.6	190	GSM850	Rear	10	CAB2000010C1	0.865	0.04

Note: According to the values in the above table, the battery, CAB2000010C1, is the primary battery. We'll perform the Body measurement with this battery and retest on highest value point with others.

14.2 SAR results for Fast SAR

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

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
836.6	190	Left	Touch	/	32.50	32.6	0.254	**0.26**	0.365	**0.37**	0.15
836.6	190	Left	Tilt	/	32.50	32.6	0.209	**0.21**	0.297	**0.30**	0.01
848.8	251	Right	Touch	Fig.1	32.42	32.6	0.351	**0.37**	0.464	**0.48**	-0.04
836.6	190	Right	Touch	/	32.50	32.6	0.272	**0.28**	0.396	**0.41**	-0.02
824.2	128	Right	Touch	/	32.53	32.6	0.235	**0.24**	0.350	**0.36**	-0.04
836.6	190	Right	Tilt	/	32.50	32.6	0.186	**0.19**	0.275	**0.28**	0.02

Table 14.2-2: SAR Values (GSM 850 MHz Band-Body)

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C											
Frequency		Mode (number of timeslots)	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
836.6	190	GPRS(2)	Front	/	31.24	31.5	0.506	**0.54**	0.714	**0.76**	-0.07
848.8	251	GPRS(2)	Rear	Fig.2	31.28	31.5	0.700	**0.74**	0.909	**0.96**	-0.07
836.6	190	GPRS(2)	Rear	/	31.24	31.5	0.605	**0.64**	0.865	**0.92**	-0.19
824.2	128	GPRS(2)	Rear	/	31.18	31.5	0.580	**0.62**	0.830	**0.89**	-0.06
836.6	190	GPRS(2)	Left	/	31.24	31.5	0.309	**0.33**	0.458	**0.49**	0.12
836.6	190	GPRS(2)	Right	/	31.24	31.5	0.440	**0.47**	0.652	**0.69**	-0.05
836.6	190	GPRS(2)	Bottom	/	31.24	31.5	0.093	**0.10**	0.140	**0.15**	0.15
848.8	251	EGPRS(2)	Rear	/	31.26	31.5	0.593	**0.63**	0.846	**0.89**	-0.03

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

Table 14.2-3: SAR Values (GSM1900 MHz Band - Head)

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
1909.8	810	Left	Touch	/	29.38	29.7	0.098	**0.11**	0.168	**0.18**	0.16
1880	661	Left	Touch	Fig.3	29.46	29.7	0.114	**0.12**	0.183	**0.19**	0.11
1850.2	512	Left	Touch	/	29.49	29.7	0.098	**0.10**	0.167	**0.18**	-0.12
1880	661	Left	Tilt	/	29.46	29.7	0.047	**0.05**	0.084	**0.09**	0.07
1880	661	Right	Touch	/	29.46	29.7	0.083	**0.09**	0.143	**0.15**	-0.09
1880	661	Right	Tilt	/	29.46	29.7	0.047	**0.05**	0.091	**0.10**	0.03

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

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C											
Frequency		Mode (number of timeslots)	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
1880	661	GPRS(3)	Front	/	26.99	28	0.268	**0.34**	0.448	**0.57**	-0.1
1880	661	GPRS(3)	Rear	/	26.99	28	0.257	**0.32**	0.409	**0.52**	0.19
1880	661	GPRS(3)	Left	/	26.99	28	0.121	**0.15**	0.212	**0.27**	0.11
1880	661	GPRS(3)	Right	/	26.99	28	0.059	**0.07**	0.097	**0.12**	0.04
1909.8	810	GPRS(3)	Bottom	Fig.4	26.92	28	0.346	**0.44**	0.661	**0.85**	-0.02
1880	661	GPRS(3)	Bottom	/	26.99	28	0.258	**0.33**	0.487	**0.61**	-0.03
1850.2	512	GPRS(3)	Bottom	/	26.99	28	0.275	**0.35**	0.541	**0.68**	-0.19
1909.8	810	EGPRS(3)	Bottom	/	26.93	28	0.238	**0.30**	0.469	**0.60**	-0.16

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

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

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
836.4	4182	Left	Touch	/	22.77	23.5	0.125	**0.15**	0.180	**0.21**	0.09
836.4	4182	Left	Tilt	/	22.77	23.5	0.102	**0.12**	0.144	**0.17**	-0.02
846.6	4233	Right	Touch	Fig.5	22.63	23.5	0.227	**0.28**	0.297	**0.36**	0.08
836.4	4182	Right	Touch	/	22.77	23.5	0.135	**0.16**	0.196	**0.23**	0.08
826.4	4132	Right	Touch	/	22.41	23.5	0.154	**0.20**	0.231	**0.30**	0.01
836.4	4182	Right	Tilt	/	22.77	23.5	0.092	**0.11**	0.134	**0.16**	-0.05

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

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C										
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.									
836.4	4182	Front	/	22.77	23.5	0.180	**0.21**	0.253	**0.30**	0.19
846.6	4233	Rear	Fig.6	22.63	23.5	0.428	**0.52**	0.554	**0.68**	0.08
836.4	4182	Rear	/	22.77	23.5	0.241	**0.29**	0.342	**0.40**	0.02
826.4	4132	Rear	/	22.41	23.5	0.313	**0.40**	0.442	**0.57**	0.17
836.4	4182	Left	/	22.77	23.5	0.182	**0.22**	0.271	**0.32**	-0.19
836.4	4182	Right	/	22.77	23.5	0.177	**0.21**	0.262	**0.31**	0.11
836.4	4182	Bottom	/	22.77	23.5	0.041	**0.05**	0.061	**0.07**	-0.15

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

Table 14.2-7: SAR Values (WCDMA1900 MHz Band - Head)

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
1907.6	9538	Left	Touch	/	22.29	23.5	0.159	**0.21**	0.271	**0.36**	0.15
1880	9400	Left	Touch	Fig.7	22.51	23.5	0.185	**0.23**	0.295	**0.37**	-0.14
1852.4	9262	Left	Touch	/	22.64	23.5	0.165	**0.20**	0.280	**0.34**	0.18
1880	9400	Left	Tilt	/	22.51	23.5	0.072	**0.09**	0.124	**0.16**	0.09
1880	9400	Right	Touch	/	22.51	23.5	0.133	**0.17**	0.224	**0.28**	-0.05
1880	9400	Right	Tilt	/	22.51	23.5	0.074	**0.09**	0.140	**0.18**	-0.06

Table 14.2-8: SAR Values (WCDMA1900 MHz Band-Body)

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C										
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.									
1880	9400	Front	/	22.51	23.5	0.190	**0.24**	0.319	**0.40**	-0.11
1880	9400	Rear	/	22.51	23.5	0.184	**0.23**	0.292	**0.37**	-0.09
1880	9400	Left	/	22.51	23.5	0.099	**0.12**	0.175	**0.22**	-0.08
1880	9400	Right	/	22.51	23.5	0.055	**0.07**	0.092	**0.12**	0.06
1907.6	9538	Bottom	/	22.29	23.5	0.179	**0.24**	0.365	**0.48**	-0.02
1880	9400	Bottom	Fig.8	22.51	23.5	0.213	**0.27**	0.407	**0.51**	-0.02
1852.4	9262	Bottom	/	22.64	23.5	0.181	**0.22**	0.369	**0.45**	-0.12

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

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

Ambient Temperature: 23.0 °C Liquid Temperature: 22.5 °C											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
1752.6	1513	Left	Touch	Fig.9	22.35	23.5	0.206	**0.27**	0.320	**0.42**	-0.08
1732.4	1412	Left	Touch	/	22.46	23.5	0.171	**0.22**	0.287	**0.36**	0.11
1712.4	1312	Left	Touch	/	22.54	23.5	0.169	**0.21**	0.281	**0.35**	0.03
1732.4	1412	Left	Tilt	/	22.46	23.5	0.065	**0.08**	0.105	**0.13**	0.12
1732.4	1412	Right	Touch	/	22.46	23.5	0.140	**0.18**	0.235	**0.30**	0.04
1732.4	1412	Right	Tilt	/	22.46	23.5	0.064	**0.08**	0.114	**0.14**	0.19

Table 14.2-10: SAR Values (WCDMA 1700 MHz Band - Body)

Ambient Temperature: 23.0 °C Liquid Temperature: 22.5 °C										
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.									
1732.4	1412	Front	/	22.46	23.5	0.267	**0.34**	0.410	**0.52**	0.02
1752.6	1513	Rear	Fig.10	22.35	23.5	0.390	**0.51**	0.594	**0.77**	-0.13
1732.4	1412	Rear	/	22.46	23.5	0.343	**0.44**	0.561	**0.71**	-0.09
1712.4	1312	Rear	/	22.54	23.5	0.401	**0.50**	0.610	**0.76**	-0.09
1732.4	1412	Left	/	22.46	23.5	0.146	**0.19**	0.240	**0.30**	-0.11
1732.4	1412	Right	/	22.46	23.5	0.054	**0.07**	0.083	**0.11**	0.05
1732.4	1412	Bottom	/	22.46	23.5	0.251	**0.32**	0.451	**0.57**	0.01

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

Table 14.2-11: SAR Values (GSM850 MHz Band - Head)– other batteries

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C											
Frequency		Side	Test Position	Battery	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
848.8	251	Right	Touch	1	32.42	32.6	0.342	**0.36**	0.445	**0.46**	0.04

Note1: The battery 1 is CAB2000041C7(711700096011).

Table 14.2-12: SAR Values (GSM850 MHz Band-Body)– other batteries

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C										
Frequency		Test Position	Battery	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.									
848.8	251	Rear	1	31.28	31.5	0.685	**0.72**	0.886	**0.93**	0.03

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

Note1: The battery 1 is CAB2000041C7 (711700096011).

14.3 SAR results for Standard procedure

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

Table 14.3-1: SAR Values (GSM 850 MHz Band - Head)

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
848.8	251	Right	Touch	Fig.1	32.42	32.6	0.351	**0.37**	0.464	**0.48**	-0.04

Table 14.3-2: SAR Values (GSM 850 MHz Band-Body)

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C											
Frequency		Mode (number of timeslots)	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
848.8	251	GPRS	Rear	Fig.2	31.28	31.5	0.700	**0.74**	0.909	**0.96**	-0.07

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

Table 14.3-3: SAR Values (GSM1900 MHz Band - Head)

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
1880	661	Left	Touch	Fig.3	29.46	29.7	0.114	**0.12**	0.183	**0.19**	0.11

Table 14.3-4: SAR Values (GSM 1900 MHz Band-Body)

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C											
Frequency		Mode (number of timeslots)	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
1909.8	810	GPRS	Bottom	Fig.4	26.92	28	0.346	**0.44**	0.661	**0.85**	-0.02

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

Table 14.3-5: SAR Values (WCDMA 850 MHz Band - Head)

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
846.6	4233	Right	Touch	Fig.5	22.63	23.5	0.227	**0.28**	0.297	**0.36**	0.08

Table 14.3-6: SAR Values (WCDMA 850 MHz Band-Body)

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C										
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.									
846.6	4233	Rear	Fig.6	22.63	23.5	0.428	**0.52**	0.554	**0.68**	0.08

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

Table 14.3-7: SAR Values (WCDMA1900 MHz Band - Head)

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
1880	9400	Left	Touch	Fig.7	22.51	23.5	0.185	**0.23**	0.295	**0.37**	-0.14

Table 14.3-8: SAR Values (WCDMA1900 MHz Band-Body)

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C										
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.									
1880	9400	Bottom	Fig.8	22.51	23.5	0.213	**0.27**	0.407	**0.51**	-0.02

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

Table 14.3-9: SAR Values (WCDMA 1700 MHz Band - Head)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
1752.6	1513	Left	Touch	Fig.9	22.35	23.5	0.206	**0.27**	0.320	**0.42**	-0.08

Table 14.3-10: SAR Values (WCDMA 1700 MHz Band - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C										
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.									
1752.6	1513	Rear	Fig.10	22.35	23.5	0.390	**0.51**	0.594	**0.77**	-0.13

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

14.4 WLAN Evaluation

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

Head Evaluation

Table 14.4-1: SAR Values (WLAN - Head) – 802.11b 5.5Mbps (Fast SAR)

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
2462	11	Left	Touch	/	16.74	17	0.034	**0.04**	0.062	**0.07**	0.12
2462	11	Left	Tilt	/	16.74	17	0.024	**0.03**	0.044	**0.05**	0.17
2462	11	Right	Touch	/	16.74	17	0.016	**0.02**	0.033	**0.04**	0.12
2462	11	Right	Tilt	/	16.74	17	0.019	**0.02**	0.039	**0.04**	0.02

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

Table 14.4-2: SAR Values (WLAN - Head) – 802.11b 5.5Mbps (Full SAR)

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
2462	11	Left	Touch	Fig.11	16.74	17	0.028	**0.03**	0.068	**0.07**	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 14.4-3: SAR Values (WLAN - Head) – 802.11b 5.5Mbps (Scaled Reported SAR)

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C							
Frequency		Side	Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
MHz	Ch.						
2462	11	Left	Touch	98.25%	100%	**0.07**	**0.07**

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

Body Evaluation

Table 14.4-4: SAR Values (WLAN - Body) – 802.11b 5.5Mbps (Fast SAR)

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C										
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.									
2462	11	Front	/	16.74	17	0.008	**0.01**	0.014	**0.01**	-0.08
2462	11	Rear	/	16.74	17	0.022	**0.02**	0.048	**0.05**	0.18
2462	11	Right	/	16.74	17	0.003	**0.00**	0.008	**0.01**	-0.11
2462	11	Top	/	16.74	17	0.009	**0.01**	0.017	**0.02**	-0.14

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

Table 14.4-5: SAR Values (WLAN - Body) – 802.11b 5.5Mbps (Full SAR)

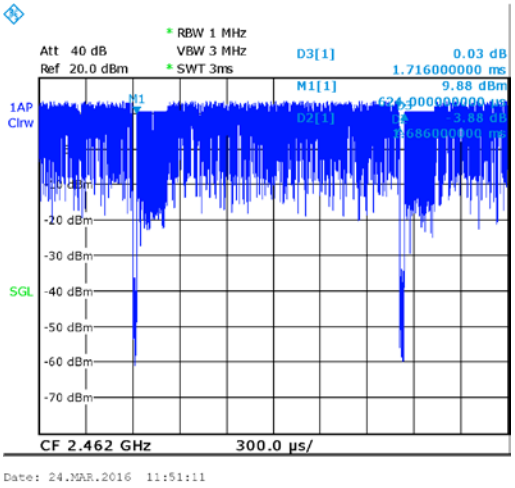
Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C										
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.									
2462	11	Rear	Fig.12	16.74	17	0.019	**0.02**	0.044	**0.05**	0.18

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

Table 14.4-6: SAR Values (WLAN - Body) – 802.11b 5.5Mbps (Scaled Reported SAR)

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C						
Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
MHz	Ch.					
2462	11	Rear	98.25%	100%	**0.05**	**0.05**

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



Picture 14.1 The plot of duty factor for WLAN-2.4G

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; steps2) 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 ≥ 1.45W/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 GSM 850 (1g)

Frequency		Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
MHz	Ch.						
848.8	251	Rear	10	0.909	0.905	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 freedom
Measurement system										
1	Probe calibration	B	5.5	N	1	1	1	5.5	5.5	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient 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	$u_c' = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$					9.25	9.12	257
Expanded uncertainty (confidence interval of 95 %)	$u_e = 2u_c$					18.5	18.2	

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

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.5	N	1	1	1	6.5	6.5	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient 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		$u_c' = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$						10.8	10.7	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						21.6	21.4	

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

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	5.5	N	1	1	1	5.5	5.5	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient 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		$u_c^{'} = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						10.1	9.95	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						20.2	19.9	

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

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.5	N	1	1	1	6.5	6.5	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient 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		$u_c^{'} = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						13.3	13.2	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						26.6	26.4	

17 MAIN TEST INSTRUMENTS

Table 17.1: List of Main Instruments

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

END OF REPORT BODY

ANNEX A Graph Results

850 Right Cheek High

Date: 2016-3-21
Electronics: DAE4 Sn777
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.942 mho/m; εr = 41.123; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: GSM 850 Frequency: 848.8 MHz Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3617 ConvF(9.56, 9.56, 9.56)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.504 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.907 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.595 W/kg
SAR(1 g) = 0.464 W/kg; SAR(10 g) = 0.351 W/kg
Maximum value of SAR (measured) = 0.509 W/kg

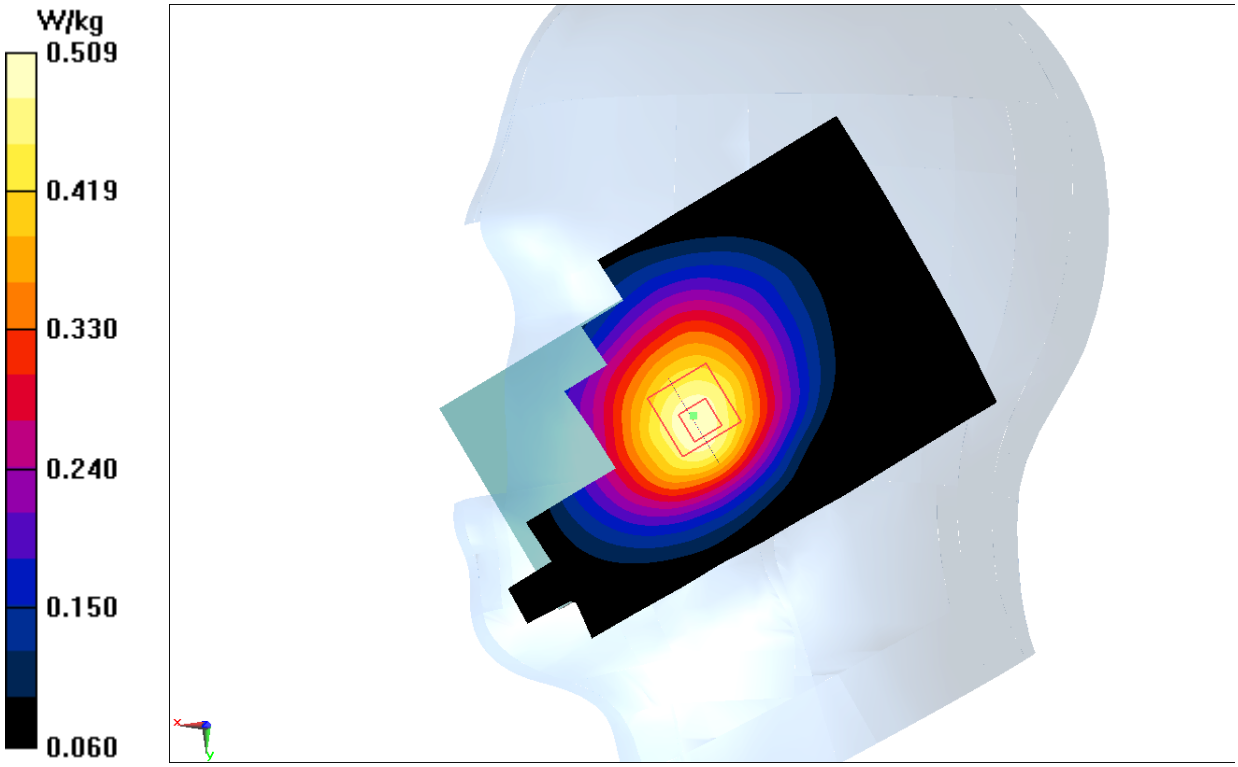


Fig.1 850MHz

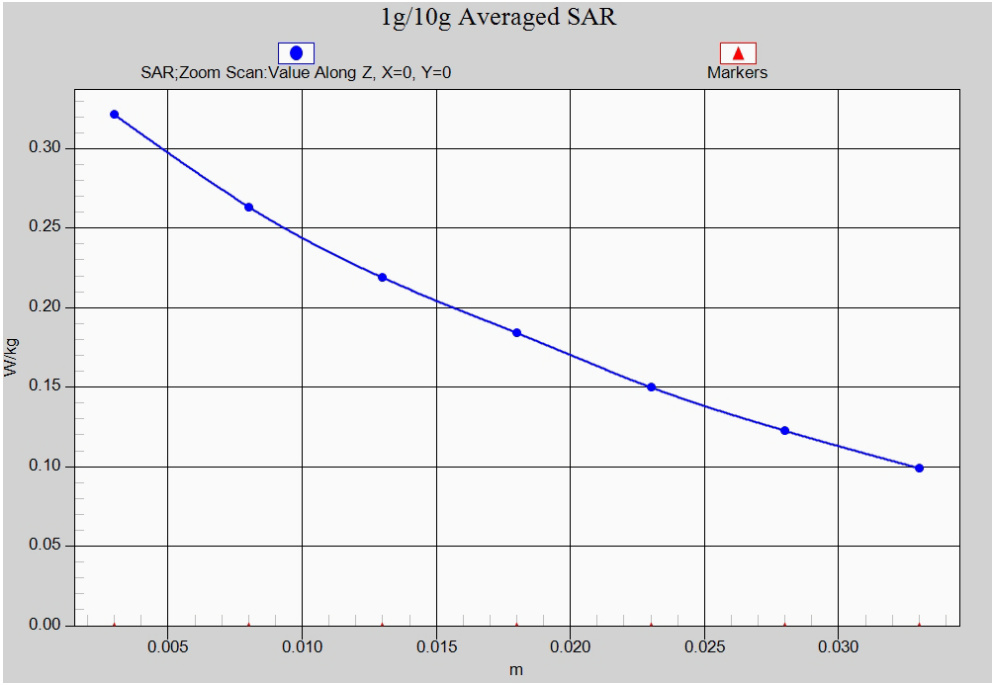


Fig. 1-1 Z-Scan at power reference point (850 MHz)

850 Body Rear High

Date: 2016-3-21
Electronics: DAE4 Sn777
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.995 mho/m; εr = 56.154; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: GSM 850 GPRS Frequency: 848.8 MHz Duty Cycle: 1:4
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) = 0.998 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 30.99 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.15 W/kg
SAR(1 g) = 0.909 W/kg; SAR(10 g) = 0.700 W/kg
Maximum value of SAR (measured) = 0.992 W/kg

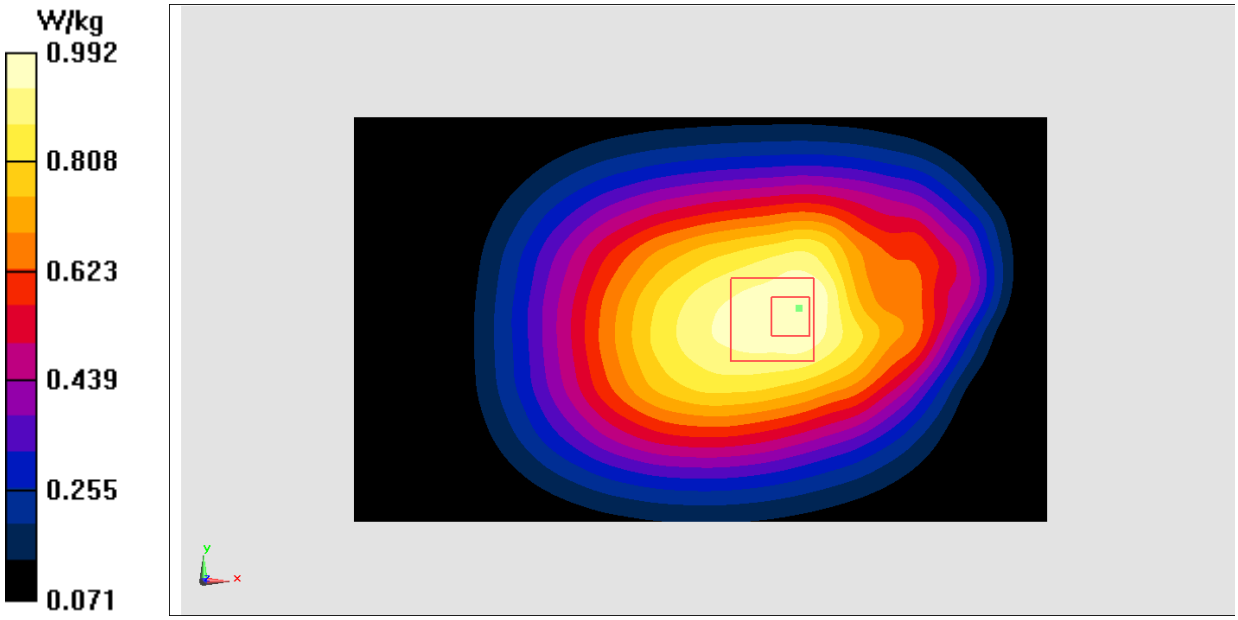


Fig.2 850 MHz

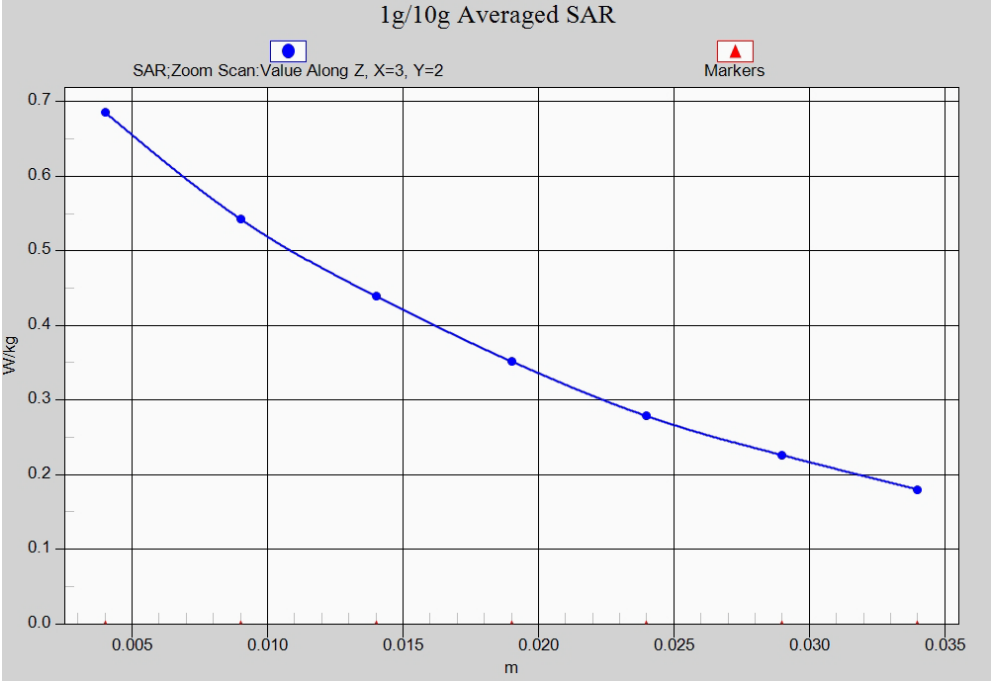


Fig. 2-1 Z-Scan at power reference point (850 MHz)

1900 Left Cheek Middle
Date: 2016-3-22
Electronics: DAE4 Sn777
Medium: Head 1900 MHz
Medium parameters used: f = 1880 MHz; σ = 1.389 mho/m; εr = 40.332; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz Frequency: 1880 MHz Duty Cycle: 1:8.3
Probe: EX3DV4 - SN3617 ConvF(8.07, 8.07, 8.07)

Area Scan (71x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.192 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.957 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.283 W/kg
SAR(1 g) = 0.183 W/kg; SAR(10 g) = 0.114 W/kg
Maximum value of SAR (measured) = 0.199 W/kg

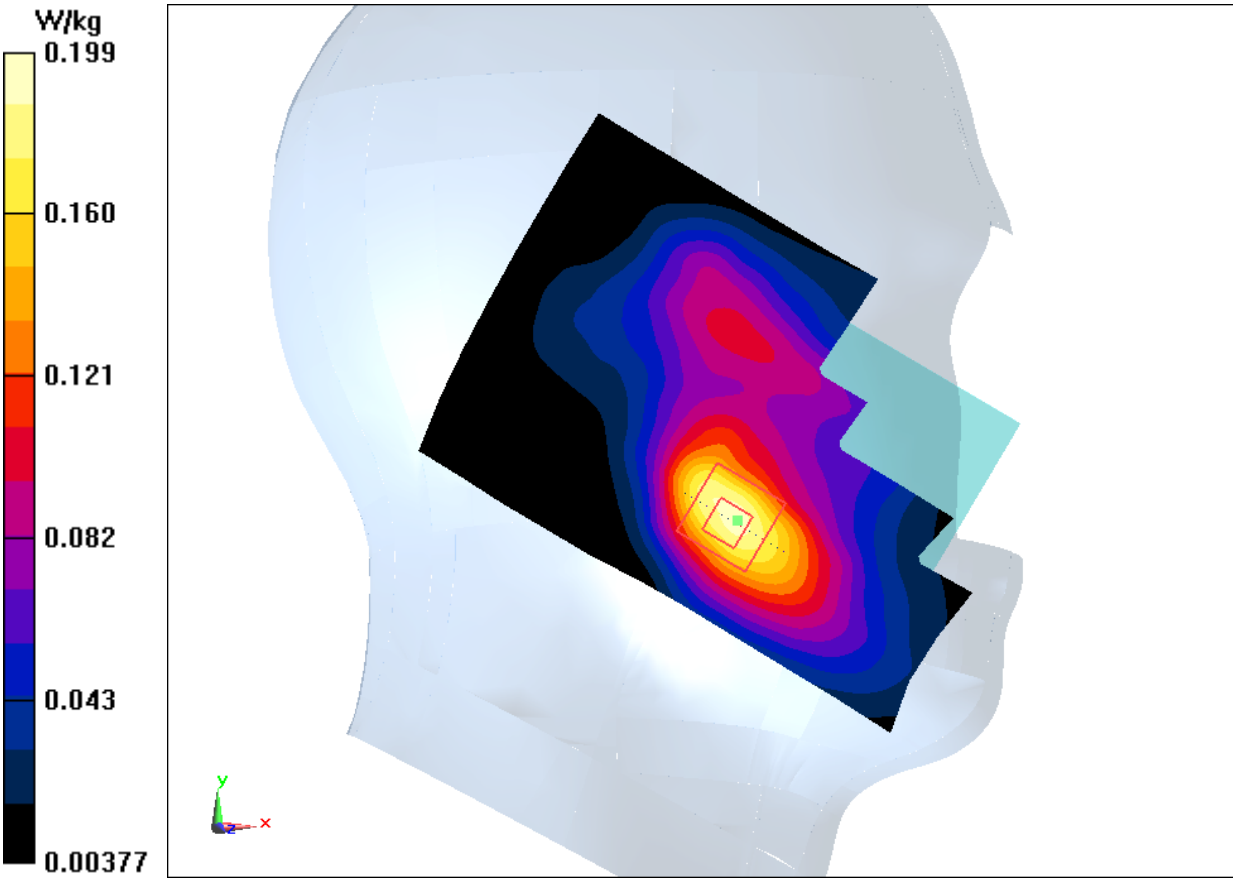


Fig.3 1900 MHz

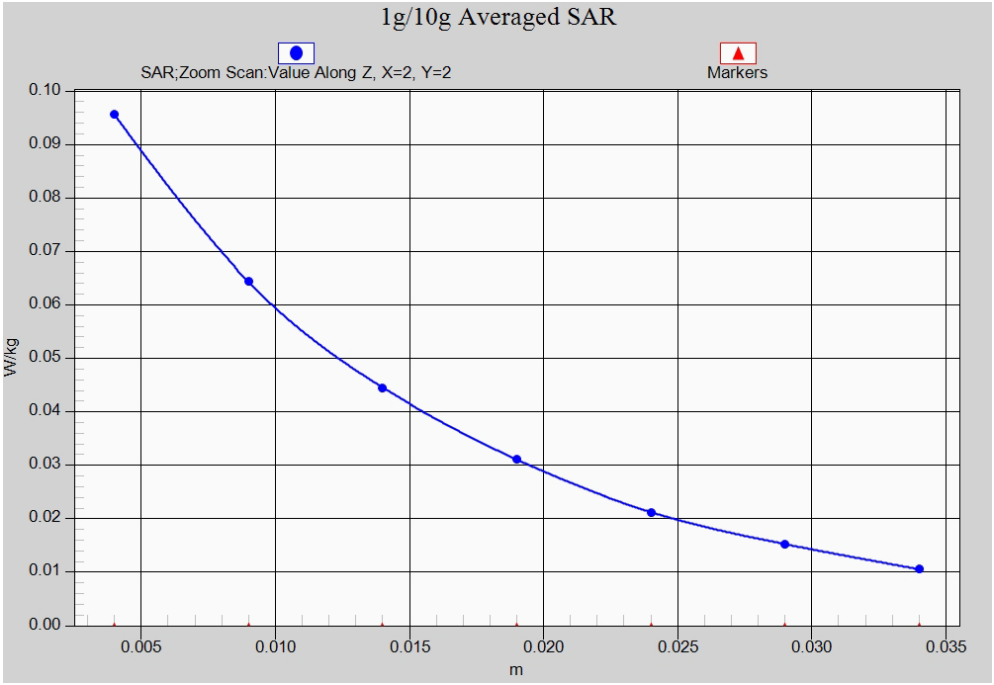


Fig. 3-1 Z-Scan at power reference point (1900 MHz)

1900 Body Bottom High

Date: 2016-3-22
Electronics: DAE4 Sn777
Medium: Body 1900 MHz
Medium parameters used: f = 1909.8 MHz; σ = 1.584 mho/m; εr = 54.101; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: GSM 1900MHz GPRS Frequency: 1909.8 MHz Duty Cycle: 1:2.67
Probe: EX3DV4 - SN3617 ConvF(7.74, 7.74, 7.74)

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.811 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.74 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.16 W/kg
SAR(1 g) = 0.661 W/kg; SAR(10 g) = 0.346 W/kg
Maximum value of SAR (measured) = 0.843 W/kg

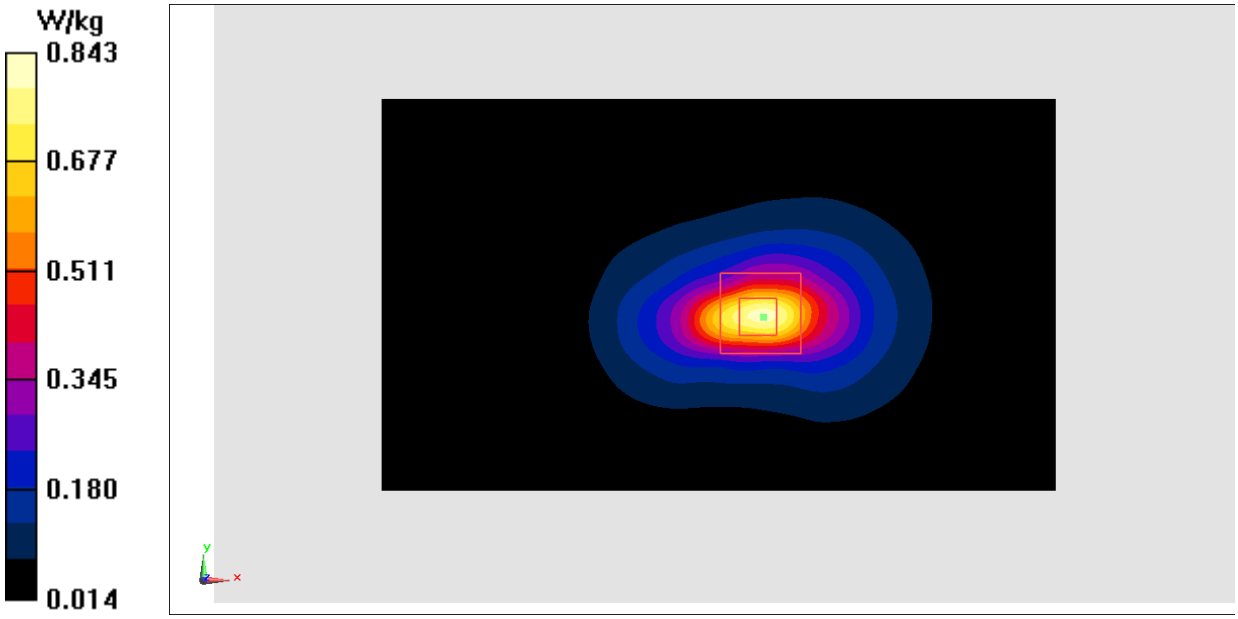


Fig.4 1900 MHz