

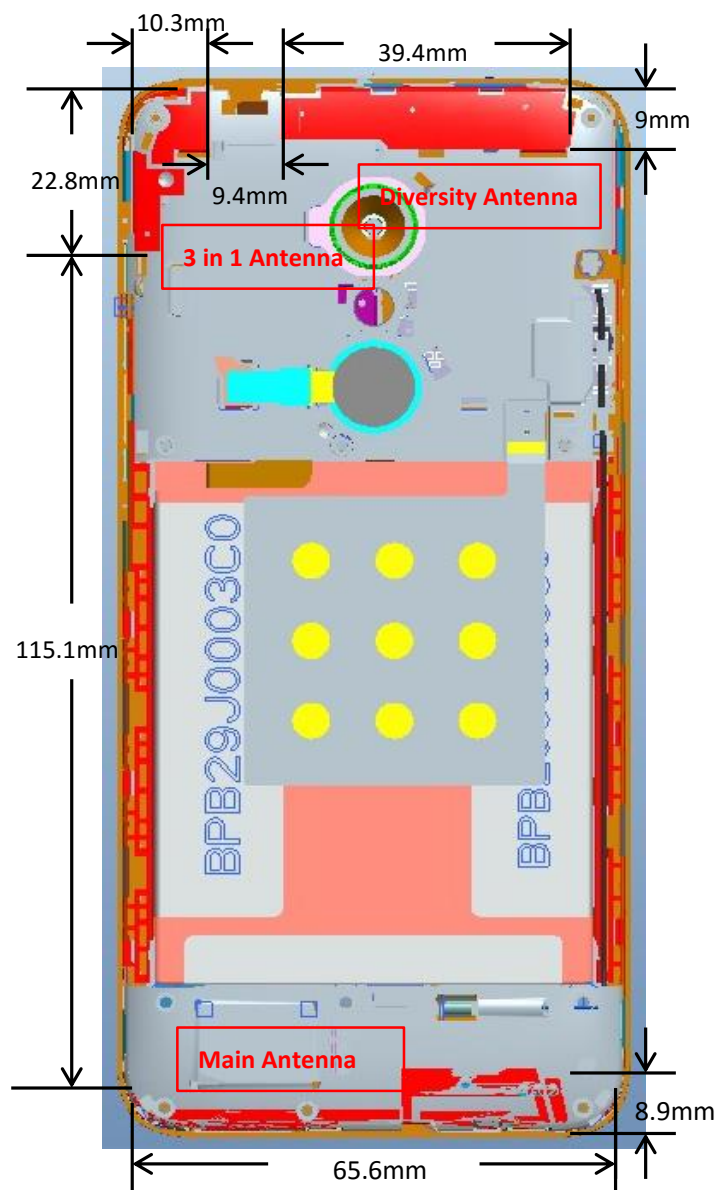
802.11n 20M	11	2462 MHz	MCS0	15.00	14.21
	6	2437 MHz		15.00	14.65
	1	2412 MHz		15.00	13.77
	11	2462 MHz	MCS1	/	/
	6	2437 MHz		15.00	14.56
	1	2412 MHz		/	/
	11	2462 MHz	MCS2	/	/
	6	2437 MHz		15.00	14.51
	1	2412 MHz		/	/
	11	2462 MHz	MCS3	/	/
	6	2437 MHz		15.00	14.41
	1	2412 MHz		/	/
	11	2462 MHz	MCS4	/	/
	6	2437 MHz		15.00	14.29
	1	2412 MHz		/	/
	11	2462 MHz	MCS5	/	/
	6	2437 MHz		15.00	14.36
	1	2412 MHz		/	/
11	2462 MHz	MCS6	/	/	
6	2437 MHz		15.00	14.30	
1	2412 MHz		/	/	
11	2462 MHz	MCS7	/	/	
6	2437 MHz		15.00	14.07	
1	2412 MHz		/	/	
802.11n 40M	9	2462 MHz	MCS0	13.00	12.39
	6	2437 MHz		13.00	12.87
	3	2412 MHz		13.00	12.54
	9	2462 MHz	MCS1	/	/
	6	2437 MHz		13.00	12.74
	3	2412 MHz		/	/
	9	2462 MHz	MCS2	/	/
	6	2437 MHz		13.00	12.24
	3	2412 MHz		/	/
	9	2462 MHz	MCS3	/	/
	6	2437 MHz		13.00	12.32
	3	2412 MHz		/	/
	9	2462 MHz	MCS4	/	/
	6	2437 MHz		13.00	12.12
	3	2412 MHz		/	/
	9	2462 MHz	MCS5	/	/
	6	2437 MHz		13.00	11.85
	3	2412 MHz		/	/
	9	2462 MHz	MCS6	/	/
	6	2437 MHz		13.00	11.58
	3	2412 MHz		/	/
9	2462 MHz	MCS7	/	/	
6	2437 MHz		13.00	11.46	
3	2412 MHz		/	/	

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:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR, where

- $f(\text{GHz})$ 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	9.6	7	5.01	Yes
		Body	9.6	7	5.01	Yes
2.4GHz WLAN 802.11 b	2.45	Head	9.58	17	50.12	No
		Body	9.58	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	0.70	0.73	1.43
Highest reported SAR value for Body	Rear	1.15	0.13	1.28

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

	Position	Main antenna	BT	Sum
Maximum reported SAR value for Head	Left hand, Touch cheek	0.70	0.21	0.91
Maximum reported SAR value for Body	Rear	1.15	0.10	1.25

[1] - Estimated SAR for Bluetooth (see the table 13.3)

Table 13.3: Estimated SAR for Bluetooth

Mode/Band	F (GHz)	Position	Distance (mm)	Upper limit of power *		Estimated _{1g} (W/kg)
				dBm	mW	
Bluetooth	2.441	Head	5	7	5.01	0.21
Bluetooth	2.441	Body	10	7	5.01	0.10

* - 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) · [$\sqrt{f(\text{GHz})/x}$] 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 < 1.6 W/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-g SAR is the highest measured SAR in each exposure configuration, wireless mode and frequency band combination or more than 1.2W/kg.

The calculated SAR is obtained by the following formula:

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

Where P_{Target} is the power of manufacturing upper limit;

P_{Measured} is the measured power in chapter 11.

Mode	Duty Cycle
Speech for GSM850/1900	1:8.3
GPRS&EGPRS for GSM850	1:2
GPRS&EGPRS for GSM1900	1:4
WCDMA<E	1:1

14.1 Evaluation of multi-batteries

Note: B1: CAC2900007C1 **B2:** CAC2900009C7

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

frequency		Mode/Band	Side	Position	BatteryType	1g SAR (W/kg)	PowerDrift
MHz	Channel						
2437	6	WLAN2450	Right	Cheek	CAC2900007C1	0.318	0.08
2437	6	WLAN2450	Right	Cheek	CAC2900009C7	0.316	-0.04

Note: According to the values in the above table, the battery, B1, is the primary

battery. We'll perform the head measurement with this battery and retest on highest value point with others.

frequency		Mode/Band	Position	BatteryType	1g SAR (W/kg)	PowerDrift
MHz	Channel					
2437	6	WLAN2450	Rear	CAC2900007C1	0.118	-0.05
2437	6	WLAN2450	Rear	CAC2900009C7	0.114	0.04

Note: According to the values in the above table, the battery, B1, 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

Note: H1: CCB0046A10C1 H2: CCB0046A10C4

Table 14-1 GSM850 #1 Head

GSM850 #1 Head									
Ambient Temperature:			22.2			Liquid Temperature:			22.3
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]			
			CH251 848.8 MHz	CH190 836.6 MHz	CH128 824.2 MHz	CH251 848.8 MHz	CH190 836.6 MHz	CH128 824.2 MHz	
GSM	Tune-up		33.30	33.30	33.30	Scaling factor*			
	Slot Average Power [dBm]		32.56	32.61	32.59	1.18	1.17	1.18	
	Left Cheek	1g SAR		0.229			0.27		
		10g SAR		0.18			0.21		
		Deviation		0.04			0.04		
	Left Tilt	1g SAR		0.165			0.19		
		10g SAR		0.127			0.15		
		Deviation		-0.08			-0.08		
	Right Cheek	1g SAR	0.316	0.278	0.28	0.37	0.33	0.33	
		10g SAR	0.237	0.207	0.211	0.28	0.24	0.25	
		Deviation	0.03	0.01	0.02	0.03	0.01	0.02	
	Right Tilt	1g SAR		0.198			0.23		
10g SAR			0.154			0.18			
Deviation			0.05			0.05			
GSM B2	Right Cheek	1g SAR	0.307			0.36			
		10g SAR	0.231			0.27			
		Deviation	0.03			0.03			

Table 14-2 GSM850 #1 Body

GSM850 #1 Body									
Ambient Temperature:			22.2			Liquid Temperature:			22.3
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]			
			CH251 848.8 MHz	CH190 836.6 MHz	CH128 824.2 MHz	CH251 848.8 MHz	CH190 836.6 MHz	CH128 824.2 MHz	
GPRS 4 Txslots	Tune-up		27.50	27.50	27.50	Scaling factor*			
	Slot Average Power [dBm]		27.07	27.05	26.96	1.10	1.11	1.13	
	Front	1g SAR		0.432			0.48		
		10g SAR		0.35			0.39		
		Deviation		0.11			0.11		
	Rear	1g SAR	0.48	0.471	0.461	0.53	0.52	0.52	
		10g SAR	0.368	0.362	0.358	0.41	0.40	0.41	
		Deviation	-0.08	0.02	-0.11	-0.08	0.02	-0.11	
	Left edge	1g SAR		0.086			0.10		
		10g SAR		0.059			0.07		
		Deviation		0.05			0.05		
	Right edge	1g SAR		0.287			0.32		
10g SAR			0.213			0.24			
Deviation			0.09			0.09			
Bottom edge	1g SAR		0.101			0.11			
	10g SAR		0.062			0.07			
	Deviation		0.12			0.12			
EGPRS GMSK 4 Txslots	Tune-up		27.50	27.50	27.50	Scaling factor*			
	Slot Average Power [dBm]		27.03	27.04	26.95	1.11	1.11	1.14	
	Rear	1g SAR	0.463			0.52			
		10g SAR	0.358			0.40			
Deviation		0.04			0.04				
GPRS 4 Txslots B2	Rear	1g SAR	0.453			0.50			
		10g SAR	0.35			0.39			
		Deviation	0.17			0.17			

Table 14-3 PCS1900 #1 Head

PCS1900 #1 Head									
Ambient Temperature:			22.2			Liquid Temperature:			22.3
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]			
			CH810 1909.8	CH661 1880 MHz	CH512 1850.2	CH810 1909.8	CH661 1880 MHz	CH512 1850.2	
GSM	Tune-up		30.30	30.30	30.30	Scaling factor*			
	Slot Average Power [dBm]		29.51	29.53	29.54	1.20	1.19	1.19	
	Left Cheek	1g SAR	0.182	0.214	0.258	0.22	0.26	0.31	
		10g SAR	0.112	0.134	0.162	0.13	0.16	0.19	
		Deviation	0.14	0.02	0.06	0.14	0.02	0.06	
	Left Tilt	1g SAR		0.112			0.13		
		10g SAR		0.068			0.08		
		Deviation		-0.11			-0.11		
	Right Cheek	1g SAR		0.186			0.22		
		10g SAR		0.115			0.14		
		Deviation		0.15			0.15		
	Right Tilt	1g SAR		0.068			0.08		
		10g SAR		0.042			0.05		
		Deviation		0.08			0.08		
	GSM B2	Left Cheek	1g SAR			0.201			0.24
10g SAR					0.129			0.15	
Deviation					0.12			0.12	

Table 14-4 PCS1900 #1 Body

PCS1900 #1 Body									
Ambient Temperature:			22.2			Liquid Temperature:			22.3
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]			
			CH810 1909.8	CH661 1880 MHz	CH512 1850.2	CH810 1909.8	CH661 1880 MHz	CH512 1850.2	
GPRS 2 Txslots	Tune-up		28.00	28.00	28.00	Scaling factor*			
	Slot Average Power [dBm]		27.30	27.25	27.26	1.18	1.19	1.19	
	Front	1g SAR		0.353			0.42		
		10g SAR		0.225			0.27		
		Deviation		0.05			0.05		
	Rear	1g SAR	0.319	0.392	0.505	0.37	0.47	0.60	
		10g SAR	0.183	0.258	0.335	0.22	0.31	0.40	
		Deviation	0.08	-0.02	-0.09	0.08	-0.02	-0.09	
	Left edge	1g SAR		0.155			0.18		
		10g SAR		0.094			0.11		
		Deviation		0.16			0.16		
	Right edge	1g SAR		0.13			0.15		
		10g SAR		0.077			0.09		
		Deviation		0.05			0.05		
	Bottom edge	1g SAR		0.255			0.30		
		10g SAR		0.151			0.18		
		Deviation		0.13			0.13		
	EGPRS GMSK 2 Txslots	Tune-up		28.00	28.00	28.00	Scaling factor*		
		Slot Average Power [dBm]		27.26	27.24	27.25	1.19	1.19	1.19
		Rear	1g SAR			0.428			0.51
			10g SAR			0.283			0.34
Deviation				0.09			0.09		
GPRS 2 Txslots B2	Rear	1g SAR			0.488			0.58	
		10g SAR			0.321			0.38	
		Deviation			0.1			0.10	

Table 14-5 WCDMA1900-BII #1Head

WCDMA1900-BII #1Head								
Ambient Temperature: 22.2			Liquid Temperature: 22.3					
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			CH9538 1907.6 MHz	CH9400 1880 MHz	CH9262 1852.4 MHz	CH9538 1907.6 MHz	CH9400 1880 MHz	CH9262 1852.4 MHz
RMC	Tune-up		24.00	24.00	24.00	Scaling factor*		
	Slot Average Power [dBm]		23.60	23.67	23.75	1.10	1.08	1.06
	Left Cheek	1g SAR		0.443			0.48	
		10g SAR		0.263			0.28	
		Deviation		0.08			0.08	
	Left Tilt	1g SAR		0.267			0.29	
		10g SAR		0.154			0.17	
		Deviation		-0.09			-0.09	
	Right Cheek	1g SAR	0.527	0.499	0.486	0.58	0.54	0.51
		10g SAR	0.315	0.273	0.267	0.35	0.29	0.28
		Deviation	0.19	0.07	0.08	0.19	0.07	0.08
	Right Tilt	1g SAR		0.224			0.24	
10g SAR			0.128			0.14		
Deviation			0.11			0.11		
RMC B2	Right Cheek	1g SAR	0.505			0.55		
		10g SAR	0.299			0.33		
		Deviation	0.08			0.08		

Table 14-6 WCDMA1900-BII #1Body

WCDMA1900-BII #1Body								
Ambient Temperature: 22.2			Liquid Temperature: 22.3					
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			CH9538 1907.6 MHz	CH9400 1880 MHz	CH9262 1852.4 MHz	CH9538 1907.6 MHz	CH9400 1880 MHz	CH9262 1852.4 MHz
RMC	Tune-up		24.00	24.00	24.00	Scaling factor*		
	Slot Average Power [dBm]		23.60	23.67	23.75	1.10	1.08	1.06
	Front	1g SAR		0.559			0.60	
		10g SAR		0.332			0.36	
		Deviation		0.09			0.09	
	Rear	1g SAR	0.57	0.635	0.568	0.62	0.69	0.60
		10g SAR	0.266	0.349	0.265	0.29	0.38	0.28
		Deviation	-0.04	-0.19	0.01	-0.04	-0.19	0.01
	Left edge	1g SAR		0.315			0.34	
		10g SAR		0.163			0.18	
		Deviation		0.18			0.18	
	Right edge	1g SAR		0.188			0.20	
10g SAR			0.1			0.11		
Deviation			0.04			0.04		
Bottom edge	1g SAR		0.465			0.50		
	10g SAR		0.24			0.26		
	Deviation		-0.09			-0.09		
RMC B2	Rear	1g SAR		0.591			0.64	
		10g SAR		0.326			0.35	
		Deviation		0.01			0.01	

Table 14-7 WCDMA1700-BIV #1Head

WCDMA1700-BIV #1Head									
Ambient Temperature:			22.2			Liquid Temperature:			22.3
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]			
			CH1513 1752.6 MHz	CH1412 1732.4 MHz	CH1312 1712.4 MHz	CH1513 1752.6 MHz	CH1412 1732.4 MHz	CH1312 1712.4 MHz	
RMC	Tune-up		24.00	24.00	24.00	Scaling factor*			
	Slot Average Power [dBm]		23.52	23.55	23.57	1.12	1.11	1.10	
	Left Cheek	1g SAR		0.393			0.44		
		10g SAR		0.222			0.25		
		Deviation		0.12			0.12		
	Left Tilt	1g SAR		0.142			0.16		
		10g SAR		0.085			0.09		
		Deviation		0.08			0.08		
	Right Cheek	1g SAR	0.436	0.411	0.362	0.49	0.46	0.40	
		10g SAR	0.275	0.234	0.208	0.31	0.26	0.23	
		Deviation	0.14	0.03	0.04	0.14	0.03	0.04	
	Right Tilt	1g SAR		0.158			0.18		
		10g SAR		0.095			0.11		
		Deviation		0.09			0.09		
	RMC B2	Right Cheek	1g SAR	0.426			0.48		
10g SAR			0.265			0.30			
Deviation			0.11			0.11			

Table 14-8 WCDMA1700-BIV #1Body

WCDMA1700-BIV #1Body									
Ambient Temperature:			22.2			Liquid Temperature:			22.3
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]			
			CH1513 1752.6 MHz	CH1412 1732.4 MHz	CH1312 1712.4 MHz	CH1513 1752.6 MHz	CH1412 1732.4 MHz	CH1312 1712.4 MHz	
RMC	Tune-up		24.00	24.00	24.00	Scaling factor*			
	Slot Average Power [dBm]		23.52	23.55	23.57	1.12	1.11	1.10	
	Front	1g SAR		0.627			0.70		
		10g SAR		0.422			0.47		
		Deviation		0.08			0.08		
	Rear	1g SAR	0.703	0.736	0.689	0.79	0.82	0.76	
		10g SAR	0.472	0.495	0.464	0.53	0.55	0.51	
		Deviation	0.03	-0.09	0.06	0.03	-0.09	0.06	
	Left edge	1g SAR		0.308			0.34		
		10g SAR		0.188			0.21		
		Deviation		0.03			0.03		
	Right edge	1g SAR		0.101			0.11		
		10g SAR		0.063			0.07		
		Deviation		0.17			0.17		
	Bottom edge	1g SAR		0.351			0.39		
10g SAR			0.206			0.23			
Deviation			0.05			0.05			
RMC B2	Rear	1g SAR		0.698			0.77		
		10g SAR		0.474			0.53		
		Deviation		0.08			0.08		

Table 14-9 WCDMA850-BV #1Head

WCDMA850-BV #1Head									
Ambient Temperature:			22.2			Liquid Temperature:			22.3
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]			
			CH4233 846.6 MHz	CH4182 835.4 MHz	CH4132 826.4 MHz	CH4233 846.6 MHz	CH4182 835.4 MHz	CH4132 826.4 MHz	
RMC	Tune-up		24.00	24.00	24.00	Scaling factor*			
	Slot Average Power [dBm]		23.41	23.41	23.42	1.15	1.15	1.14	
	Left Cheek	1g SAR		0.269			0.31		
		10g SAR		0.203			0.23		
		Deviation		0.02			0.02		
	Left Tilt	1g SAR		0.208			0.24		
		10g SAR		0.162			0.19		
		Deviation		0.07			0.07		
	Right Cheek	1g SAR	0.302	0.322	0.336	0.35	0.37	0.38	
		10g SAR	0.205	0.241	0.25	0.23	0.28	0.29	
		Deviation	0.01	-0.11	0.09	0.01	-0.11	0.09	
	Right Tilt	1g SAR		0.223			0.26		
10g SAR			0.174			0.20			
Deviation			0.04			0.04			
RMC B2	Right Cheek	1g SAR			0.329			0.38	
		10g SAR			0.243			0.28	
		Deviation			0.04			0.04	

Table 14-10 WCDMA850-BV #1Body

WCDMA850-BV #1Body									
Ambient Temperature:			22.2			Liquid Temperature:			22.3
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]			
			CH4233 846.6 MHz	CH4182 835.4 MHz	CH4132 826.4 MHz	CH4233 846.6 MHz	CH4182 835.4 MHz	CH4132 826.4 MHz	
RMC	Tune-up		24.00	24.00	24.00	Scaling factor*			
	Slot Average Power [dBm]		23.41	23.41	23.42	1.15	1.15	1.14	
	Front	1g SAR		0.386			0.44		
		10g SAR		0.298			0.34		
		Deviation		0.08			0.08		
	Rear	1g SAR	0.483	0.503	0.492	0.55	0.58	0.56	
		10g SAR	0.366	0.387	0.375	0.42	0.44	0.43	
		Deviation	0.14	-0.01	-0.18	0.14	-0.01	-0.18	
	Left edge	1g SAR		0.321			0.37		
		10g SAR		0.224			0.26		
		Deviation		0.06			0.06		
	Right edge	1g SAR		0.457			0.52		
		10g SAR		0.334			0.38		
		Deviation		0.11			0.11		
	Bottom edge	1g SAR		0.182			0.21		
		10g SAR		0.099			0.11		
		Deviation		0.05			0.05		
	RMC B2	Rear	1g SAR		0.49			0.56	
			10g SAR		0.371			0.42	
			Deviation		0.09			0.09	



Table 14-11 LTE1900-FDD2 #1 Head

LTE1900-FDD2 #1 Head								
Ambient Temperature: 22.2				Liquid Temperature: 22.3				
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			19100	18900	18700	19100	18900	18700
			M	M	M	M	M	M
20MHz QPSK1RB	Tune-up		24.50	24.50	24.50	Scaling factor*		
	Measured Power [dBm]		23.33	23.26	23.26	1.31	1.33	1.33
	Left Cheek	1g SAR	0.535			0.70		
		10g SAR	0.33			0.43		
		Deviation	-0.05			-0.05		
	Left Tilt	1g SAR	0.22			0.29		
		10g SAR	0.136			0.18		
		Deviation	0.07			0.07		
	Right Cheek	1g SAR	0.493			0.65		
		10g SAR	0.295			0.39		
		Deviation	0.12			0.12		
	Right Tilt	1g SAR	0.185			0.24		
		10g SAR	0.111			0.15		
		Deviation	0.09			0.09		
TRUE	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			19100	18900	18700	19100	18900	18700
			M	M	M	M	M	M
20MHz QPSK50% RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.17	22.21	22.23	1.36	1.35	1.34
	Left Cheek	1g SAR			0.417			0.56
		10g SAR			0.259			0.35
		Deviation			-0.11			-0.11
	Left Tilt	1g SAR			0.167			0.22
		10g SAR			0.107			0.14
		Deviation			0.07			0.07
	Right Cheek	1g SAR			0.365			0.49
		10g SAR			0.219			0.29
		Deviation			0.02			0.02
	Right Tilt	1g SAR			0.168			0.22
		10g SAR			0.101			0.14
		Deviation			0.04			0.04
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			19100	18900	18700	19100	18900	18700
			M	M	M	M	M	M
20MHz QPSK100% RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.05	22.13	22.24	1.40	1.37	1.34
	Left Cheek	1g SAR						
		10g SAR						
Deviation								
20MHz QPSK1RB B2	Left Cheek	1g SAR	0.525			0.69		
		10g SAR	0.298			0.39		
		Deviation	-0.15			-0.15		

Table 14-12 LTE1900-FDD2 #1 Body

LTE1900-FDD2 #1 Body								
Ambient Temperature: 22.2				Liquid Temperature: 22.3				
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			19100	18900	18700	19100	18900	18700
			M	M	M	M	M	M
20MHz QPSK1RB	Tune-up		24.50	24.50	24.50	Scaling factor*		
	Measured Power [dBm]		23.33	23.26	23.26	1.31	1.33	1.33
	Front	1g SAR	0.604			0.79		
		10g SAR	0.423			0.55		
		Deviation	0.08			0.08		
	Rear	1g SAR	0.709	0.693	0.679	0.93	0.92	0.90
		10g SAR	0.46	0.448	0.441	0.60	0.60	0.59
		Deviation	-0.09	0.16	0.02	-0.09	0.16	0.02
	Left edge	1g SAR	0.299			0.39		
		10g SAR	0.168			0.22		
		Deviation	0.11			0.11		
	Right edge	1g SAR	0.212			0.28		
		10g SAR	0.126			0.17		
		Deviation	0.05			0.05		
	Bottom edge	1g SAR	0.483			0.63		
10g SAR		0.278			0.36			
Deviation		-0.04			-0.04			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			19100	18900	18700	19100	18900	18700
			M	M	M			
20MHz QPSK50% RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.17	22.21	22.23	1.36	1.35	1.34
	Front	1g SAR			0.587			0.79
		10g SAR			0.389			0.52
		Deviation			0.07			0.07
	Rear	1g SAR	0.632	0.654	0.648	0.86	0.88	0.87
		10g SAR	0.408	0.411	0.415	0.55	0.55	0.56
		Deviation	-0.07	0.09	0.12	-0.07	0.09	0.12
	Left edge	1g SAR			0.22			0.29
		10g SAR			0.13			0.17
		Deviation			-0.09			-0.09
	Right edge	1g SAR			0.146			0.20
		10g SAR			0.089			0.12
		Deviation			0.1			0.10
	Bottom edge	1g SAR			0.343			0.46
10g SAR				0.197			0.26	
Deviation				0.14			0.14	
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			19100	18900	18700	19100	18900	18700
			M	M	M			
20MHz QPSK100% RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.05	22.13	22.24	1.40	1.37	1.34
	Rear	1g SAR			0.474			0.63
		10g SAR			0.276			0.37
Deviation				0.15			0.15	
20MHz QPSK1RB B2	Rear	1g SAR	0.687			0.90		
		10g SAR	0.446			0.58		
		Deviation	0.13			0.13		



Table 14-13 LTE1700-FDD4 #1 Head

LTE1700-FDD4 #1 Head								
Ambient Temperature: 22.2				Liquid Temperature: 22.3				
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			20300	20175	20050	20300	20175	20050
			M	M	M	M	M	M
20MHz QPSK1RB	Tune-up		24.50	24.50	24.50	Scaling factor*		
	Measured Power [dBm]		23.35	23.28	23.27	1.30	1.32	1.33
	Left Cheek	1g SAR	0.445			0.58		
		10g SAR	0.282			0.37		
		Deviation	0.08			0.08		
	Left Tilt	1g SAR	0.214			0.28		
		10g SAR	0.136			0.18		
		Deviation	0.14			0.14		
	Right Cheek	1g SAR	0.469			0.61		
		10g SAR	0.289			0.38		
		Deviation	0.09			0.09		
	Right Tilt	1g SAR	0.218			0.28		
		10g SAR	0.133			0.17		
Deviation		-0.05			-0.05			
TRUE	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			20300	20175	20050	20300	20175	20050
			L	L	M	L	L	M
20MHz QPSK50% RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.20	22.31	22.23	1.35	1.32	1.34
	Left Cheek	1g SAR		0.333			0.44	
		10g SAR		0.209			0.27	
		Deviation		0.02			0.02	
	Left Tilt	1g SAR		0.142			0.19	
		10g SAR		0.089			0.12	
		Deviation		0.1			0.10	
	Right Cheek	1g SAR		0.295			0.39	
		10g SAR		0.182			0.24	
		Deviation		-0.08			-0.08	
	Right Tilt	1g SAR		0.141			0.19	
		10g SAR		0.085			0.11	
Deviation			-0.08			-0.08		
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			20300	20175	20050	20300	20175	20050
20MHz QPSK100% RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.17	22.28	22.15	1.36	1.32	1.36
	Left Cheek	1g SAR						
		10g SAR						
Deviation								
20MHz QPSK1RB B2	Right Cheek	1g SAR	0.442			0.58		
		10g SAR	0.276			0.36		
		Deviation	0.15			0.15		

Table 14-14 LTE1700-FDD4 #1 Body

LTE1700-FDD4 #1 Body								
Ambient Temperature: 22.2				Liquid Temperature: 22.3				
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			20300 M	20175 M	20050 M	20300 M	20175 M	20050 M
20MHz QPSK1RB	Tune-up		24.50	24.50	24.50	Scaling factor*		
	Measured Power [dBm]		23.35	23.28	23.27	1.30	1.32	1.33
	Front	1g SAR	0.607			0.79		
		10g SAR	0.475			0.62		
		Deviation	0.04			0.04		
	Rear	1g SAR	0.879	0.843	0.811	1.15	1.12	1.08
		10g SAR	0.577	0.532	0.509	0.75	0.70	0.67
		Deviation	-0.09	0.05	0.07	-0.09	0.05	0.07
	Left edge	1g SAR	0.357			0.47		
		10g SAR	0.212			0.28		
		Deviation	0.06			0.06		
	Right edge	1g SAR	0.138			0.18		
		10g SAR	0.081			0.11		
		Deviation	-0.09			-0.09		
	Bottom edge	1g SAR	0.442			0.58		
10g SAR		0.247			0.32			
Deviation		0.11			0.11			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			20300 L	20175 L	20050 M	20300	20175	20050
20MHz QPSK50% RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.20	22.31	22.23	1.35	1.32	1.34
	Front	1g SAR		0.478			0.63	
		10g SAR		0.303			0.40	
		Deviation		0.04			0.04	
	Rear	1g SAR	0.578	0.673	0.608	0.78	0.89	0.81
		10g SAR	0.408	0.423	0.418	0.55	0.56	0.56
		Deviation	-0.02	0.09	0.14	-0.02	0.09	0.14
	Left edge	1g SAR		0.2			0.26	
		10g SAR		0.12			0.16	
		Deviation		-0.1			-0.10	
	Right edge	1g SAR		0.068			0.09	
		10g SAR		0.04			0.05	
		Deviation		0.18			0.18	
	Bottom edge	1g SAR		0.283			0.37	
10g SAR			0.163			0.21		
Deviation			0.11			0.11		
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			20300	20175	20050	20300	20175	20050
20MHz QPSK100% RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.17	22.28	22.15	1.36	1.32	1.36
	Rear	1g SAR		0.626			0.83	
		10g SAR		0.403			0.53	
Deviation			0.15			0.15		
20MHz QPSK1RB B2	Rear	1g SAR	0.856			1.12		
		10g SAR	0.559			0.73		
		Deviation	0.14			0.14		



Table 14-15 LTE850-FDD5 #1 Head

LTE850-FDD5 #1 Head								
Ambient Temperature: 22.2				Liquid Temperature: 22.3				
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			20600	20525	20450	20600	20525	20450
			M	M	M	M	M	M
10MHz QPSK1RB	Tune-up		24.50	24.50	24.50	Scaling factor*		
	Measured Power [dBm]		23.20	23.29	23.22	1.35	1.32	1.34
	Left Cheek	1g SAR		0.19			0.25	
		10g SAR		0.156			0.21	
		Deviation		0.02			0.02	
	Left Tilt	1g SAR		0.176			0.23	
		10g SAR		0.14			0.18	
		Deviation		0.07			0.07	
	Right Cheek	1g SAR		0.28			0.37	
		10g SAR		0.212			0.28	
		Deviation		0.03			0.03	
	Right Tilt	1g SAR		0.186			0.25	
		10g SAR		0.151			0.20	
Deviation			-0.01			-0.01		
TRUE	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			20600	20525	20450	20600	20525	20450
			M	M	H	M	M	H
10MHz QPSK50% RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.15	22.13	22.15	1.36	1.37	1.37
	Left Cheek	1g SAR	0.17			0.23		
		10g SAR	0.117			0.16		
		Deviation	-0.07			-0.07		
	Left Tilt	1g SAR	0.099			0.14		
		10g SAR	0.069			0.09		
		Deviation	0.15			0.15		
	Right Cheek	1g SAR	0.2			0.27		
		10g SAR	0.137			0.19		
		Deviation	0.05			0.05		
	Right Tilt	1g SAR	0.108			0.15		
		10g SAR	0.075			0.10		
Deviation		0.08			0.08			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			20600	20525	20450	20600	20525	20450
10MHz QPSK100% RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.12	22.14	22.14	1.37	1.37	1.37
	Left Cheek	1g SAR						
		10g SAR						
Deviation								
10MHz QPSK1RB B2	Right Cheek	1g SAR		0.271			0.36	
		10g SAR		0.205			0.27	
		Deviation		0.03			0.03	

Table 14-16 LTE850-FDD5 #1 Body

LTE850-FDD5 #1 Body								
Ambient Temperature: 22.2				Liquid Temperature: 22.3				
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			20600	20525	20450	20600	20525	20450
			M	M	M	M	M	M
10MHz QPSK1RB	Tune-up		24.50	24.50	24.50	Scaling factor*		
	Measured Power [dBm]		23.20	23.29	23.22	1.35	1.32	1.34
	Front	1g SAR		0.335			0.44	
		10g SAR		0.254			0.34	
		Deviation		0.09			0.09	
	Rear	1g SAR		0.412			0.54	
		10g SAR		0.319			0.42	
		Deviation		-0.03			-0.03	
	Left edge	1g SAR		0.218			0.29	
		10g SAR		0.155			0.20	
		Deviation		0.02			0.02	
	Right edge	1g SAR		0.349			0.46	
		10g SAR		0.245			0.32	
		Deviation		0.11			0.11	
	Bottom edge	1g SAR		0.128			0.17	
10g SAR			0.07			0.09		
Deviation			0.05			0.05		
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			20600	20525	20450	20600	20525	20450
			M	M	H			
10MHz QPSK50% RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.15	22.13	22.15	1.36	1.37	1.37
	Front	1g SAR	0.259			0.35		
		10g SAR	0.202			0.28		
		Deviation	0.14			0.14		
	Rear	1g SAR	0.329			0.45		
		10g SAR	0.253			0.35		
		Deviation	-0.08			-0.08		
	Left edge	1g SAR	0.161			0.22		
		10g SAR	0.111			0.15		
		Deviation	0.11			0.11		
	Right edge	1g SAR	0.257			0.35		
		10g SAR	0.178			0.24		
		Deviation	0.03			0.03		
	Bottom edge	1g SAR	0.104			0.14		
10g SAR		0.056			0.08			
Deviation		0.15			0.15			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			20600	20525	20450	20600	20525	20450
10MHz QPSK100% RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.12	22.14	22.14	1.37	1.37	1.37
Front	1g SAR							
	10g SAR							
	Deviation							
10MHz QPSK1RB B2	Rear	1g SAR		0.39			0.52	
		10g SAR		0.301			0.40	
		Deviation		0.02			0.02	



Table 14-17 LTE2500-FDD7 #1 Head

LTE2500-FDD7 #1 Head								
Ambient Temperature: 22.2				Liquid Temperature: 22.3				
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			21350	21100	20850	21350	21100	20850
			M	M	M	M	M	M
20MHz QPSK1RB	Tune-up		23.00	23.00	23.00	Scaling factor*		
	Measured Power [dBm]		22.21	22.23	22.25	1.20	1.19	1.19
	Left Cheek	1g SAR			0.564			0.67
		10g SAR			0.295			0.35
		Deviation			0.03			0.03
	Left Tilt	1g SAR			0.272			0.32
		10g SAR			0.149			0.18
		Deviation			0.03			0.03
	Right Cheek	1g SAR			0.525			0.62
		10g SAR			0.291			0.35
		Deviation			-0.02			-0.02
	Right Tilt	1g SAR			0.4			0.48
		10g SAR			0.194			0.23
		Deviation			0.05			0.05
TRUE	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			21350	21100	20850	21350	21100	20850
			M	M	H	M	M	H
20MHz QPSK50% RB	Tune-up		22.00	22.00	22.00	Scaling factor*		
	Measured Power [dBm]		21.26	21.28	21.33	1.19	1.18	1.17
	Left Cheek	1g SAR			0.494			0.58
		10g SAR			0.259			0.30
		Deviation			0.01			0.01
	Left Tilt	1g SAR			0.196			0.23
		10g SAR			0.105			0.12
		Deviation			0.01			0.01
	Right Cheek	1g SAR			0.291			0.34
		10g SAR			0.164			0.19
		Deviation			0.04			0.04
	Right Tilt	1g SAR			0.346			0.40
		10g SAR			0.171			0.20
		Deviation			-0.02			-0.02
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			21350	21100	20850	21350	21100	20850
20MHz QPSK100% RB	Tune-up		22.00	22.00	22.00	Scaling factor*		
	Measured Power [dBm]		21.16	21.20	21.28	1.21	1.20	1.18
	Left Cheek	1g SAR						
		10g SAR						
Deviation								
20MHz QPSK1RB B2	Left Cheek	1g SAR			0.559			0.66
		10g SAR			0.288			0.34
		Deviation			0.03			0.03

Table 14-18 LTE2500-FDD7 #1 Body

LTE2500-FDD7 #1 Body								
Ambient Temperature: 22.2				Liquid Temperature: 22.3				
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			21350 M	21100 M	20850 M	21350 M	21100 M	20850 M
20MHz QPSK1RB	Tune-up		23.00	23.00	23.00	Scaling factor*		
	Measured Power [dBm]		22.21	22.23	22.25	1.20	1.19	1.19
	Front	1g SAR	0.74	0.831	0.89	0.89	0.99	1.06
		10g SAR	0.359	0.405	0.443	0.43	0.48	0.53
		Deviation	0.01	0.09	0.05	0.01	0.09	0.05
	Rear	1g SAR	0.723	0.848	0.913	0.87	1.01	1.09
		10g SAR	0.372	0.426	0.474	0.45	0.51	0.56
		Deviation	0.01	0.08	-0.02	0.01	0.08	-0.02
	Left edge	1g SAR			0.553			0.66
		10g SAR			0.296			0.35
		Deviation			-0.08			-0.08
	Right edge	1g SAR			0.124			0.15
		10g SAR			0.063			0.07
		Deviation			0.05			0.05
	Bottom edge	1g SAR			0.556			0.66
10g SAR				0.235			0.28	
Deviation				0.11			0.11	
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			21350 M	21100 M	20850 H	21350	21100	20850
20MHz QPSK50% RB	Tune-up		22.00	22.00	22.00	Scaling factor*		
	Measured Power [dBm]		21.26	21.28	21.33	1.19	1.18	1.17
	Front	1g SAR			0.521			0.61
		10g SAR			0.25			0.29
		Deviation			0.08			0.08
	Rear	1g SAR			0.557			0.65
		10g SAR			0.285			0.33
		Deviation			-0.09			-0.09
	Left edge	1g SAR			0.407			0.48
		10g SAR			0.214			0.25
		Deviation			0.08			0.08
	Right edge	1g SAR			0.114			0.13
		10g SAR			0.06			0.07
		Deviation			-0.06			-0.06
	Bottom edge	1g SAR			0.341			0.40
10g SAR				0.161			0.19	
Deviation				0.03			0.03	
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			21350	21100	20850	21350	21100	20850
20MHz QPSK100% RB	Tune-up		22.00	22.00	22.00	Scaling factor*		
	Measured Power [dBm]		21.16	21.20	21.28	1.21	1.20	1.18
	Front	1g SAR			0.614			0.72
		10g SAR			0.309			0.36
20MHz QPSK1RB B2	Rear	1g SAR			0.902			1.07
		10g SAR			0.459			0.55
		Deviation			0.09			0.09
20MHz QPSK100% RB	Rear	1g SAR			0.732			0.87
		10g SAR			0.409			0.49
		Deviation			0.05			0.05

Table 14-19 LTE700-FDD12 #1 Head

LTE700-FDD12 #1 Head								
Ambient Temperature: 22.2				Liquid Temperature: 22.3				
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			23130 M	23095 M	23060 M	23130 M	23095 M	23060 M
10MHz QPSK1RB	Tune-up		24.50	24.50	24.50	Scaling factor*		
	Measured Power [dBm]		23.35	23.40	23.37	1.30	1.29	1.30
	Left Cheek	1g SAR		0.14			0.18	
		10g SAR		0.11			0.14	
		Deviation		0.03			0.03	
	Left Tilt	1g SAR		0.112			0.14	
		10g SAR		0.089			0.11	
		Deviation		-0.09			-0.09	
	Right Cheek	1g SAR		0.142			0.18	
		10g SAR		0.112			0.14	
		Deviation		0.01			0.01	
	Right Tilt	1g SAR		0.117			0.15	
10g SAR			0.094			0.12		
Deviation			-0.05			-0.05		
TRUE	Device orientation	SAR measurement	0.1			Reported SAR [W/kg]		
			23130 M	23095 H	23060 H	23130 M	23095 H	23060 H
10MHz QPSK50% RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.22	22.31	22.41	1.34	1.31	1.29
	Left Cheek	1g SAR			0.1			0.13
		10g SAR			0.079			0.10
		Deviation			0.02			0.02
	Left Tilt	1g SAR			0.071			0.09
		10g SAR			0.055			0.07
		Deviation			0.07			0.07
	Right Cheek	1g SAR			0.112			0.14
		10g SAR			0.087			0.11
		Deviation			0.01			0.01
	Right Tilt	1g SAR			0.089			0.11
10g SAR				0.071			0.09	
Deviation				0.02			0.02	
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			23130	23095	23060	23130	23095	23060
10MHz QPSK100% RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.10	22.26	22.39	1.38	1.33	1.29
	Left Cheek	1g SAR						
		10g SAR						
Deviation								
10MHz QPSK1RB B2	Right Cheek	1g SAR		0.134			0.17	
		10g SAR		0.107			0.14	
		Deviation		-0.04			-0.04	

Table 14-20 LTE700-FDD12 #1 Body

LTE700-FDD12 #1 Body								
Ambient Temperature: 22.2				Liquid Temperature: 22.3				
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			23130	23095	23060	23130	23095	23060
			M	M	M	M	M	M
10MHz QPSK1RB	Tune-up		24.50	24.50	24.50	Scaling factor*		
	Measured Power [dBm]		23.35	23.40	23.37	1.30	1.29	1.30
	Front	1g SAR		0.205			0.26	
		10g SAR		0.148			0.19	
		Deviation		0.04			0.04	
	Rear	1g SAR		0.357			0.46	
		10g SAR		0.281			0.36	
		Deviation		-0.02			-0.02	
	Left edge	1g SAR		0.233			0.30	
		10g SAR		0.152			0.20	
		Deviation		0.09			0.09	
	Right edge	1g SAR		0.226			0.29	
		10g SAR		0.153			0.20	
		Deviation		0.16			0.16	
	Bottom edge	1g SAR		0.09			0.12	
10g SAR			0.051			0.07		
Deviation			-0.12			-0.12		
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			23130	23095	23060	23130	23095	23060
			M	H	H			
10MHz QPSK50% RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.22	22.31	22.41	1.34	1.31	1.29
	Front	1g SAR			0.182			0.23
		10g SAR			0.131			0.17
		Deviation			0.08			0.08
	Rear	1g SAR			0.274			0.35
		10g SAR			0.193			0.25
		Deviation			-0.05			-0.05
	Left edge	1g SAR			0.18			0.23
		10g SAR			0.118			0.15
		Deviation			0.02			0.02
	Right edge	1g SAR			0.203			0.26
		10g SAR			0.133			0.17
		Deviation			0.11			0.11
	Bottom edge	1g SAR			0.058			0.07
10g SAR				0.039			0.05	
Deviation				0.13			0.13	
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			23130	23095	23060	23130	23095	23060
10MHz QPSK100% RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.10	22.26	22.39	1.38	1.33	1.29
	Front	1g SAR						
		10g SAR						
Deviation								
10MHz QPSK1RB B2	Rear	1g SAR		0.322			0.41	
		10g SAR		0.264			0.34	
		Deviation		-0.05			-0.05	

Table 14-21 LTE750-FDD13 #1 Head

LTE750-FDD13 #1 Head				
Ambient Temperature:		22.2		22.3
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]	Reported SAR [W/kg]
			23230	23230
			M	M
10MHz QPSK1RB	Tune-up		24.00	Scaling factor*
	Measured Power [dBm]		23.27	1.18
	Left Cheek	1g SAR	0.263	0.31
		10g SAR	0.206	0.24
		Deviation	0.01	0.01
	Left Tilt	1g SAR	0.22	0.26
		10g SAR	0.176	0.21
		Deviation	-0.05	-0.05
	Right Cheek	1g SAR	0.295	0.35
		10g SAR	0.23	0.27
		Deviation	-0.03	-0.03
	Right Tilt	1g SAR	0.252	0.30
10g SAR		0.202	0.24	
Deviation		0.03	0.03	
TRUE	Device orientation	SAR measurement	Measured SAR [W/kg]	Reported SAR [W/kg]
			23230	23230
			H	H
10MHz QPSK50% RB	Tune-up		23.00	Scaling factor*
	Measured Power [dBm]		22.25	1.19
	Left Cheek	1g SAR	0.203	0.24
		10g SAR	0.16	0.19
		Deviation	0.06	0.06
	Left Tilt	1g SAR	0.166	0.20
		10g SAR	0.132	0.16
		Deviation	-0.01	-0.01
	Right Cheek	1g SAR	0.225	0.27
		10g SAR	0.173	0.21
		Deviation	0.04	0.04
	Right Tilt	1g SAR	0.175	0.21
10g SAR		0.141	0.17	
Deviation		0.09	0.09	
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]	Reported SAR [W/kg]
			23230	23230
10MHz QPSK100% RB	Tune-up		23.00	Scaling factor*
	Measured Power [dBm]		22.21	1.20
	Left Cheek	1g SAR		
		10g SAR		
Deviation				
10MHz QPSK1RB B2	Right Cheek	1g SAR	0.289	0.34
		10g SAR	0.226	0.27
		Deviation	0.07	0.07

Table 14-22 LTE750-FDD13 #1 Body

LTE750-FDD13 #1 Body				
Ambient Temperature:		22.2		22.3
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]	Reported SAR [W/kg]
			23230	23230
			M	M
10MHz QPSK1RB	Tune-up		24.00	Scaling factor*
	Measured Power [dBm]		23.27	1.18
	Front	1g SAR	0.366	0.43
		10g SAR	0.288	0.34
		Deviation	0.14	0.14
	Rear	1g SAR	0.562	0.66
		10g SAR	0.439	0.52
		Deviation	-0.08	-0.08
	Left edge	1g SAR	0.371	0.44
		10g SAR	0.26	0.31
		Deviation	0.09	0.09
	Right edge	1g SAR	0.472	0.56
		10g SAR	0.329	0.39
		Deviation	-0.02	-0.02
Bottom edge	1g SAR	0.089	0.11	
	10g SAR	0.049	0.06	
	Deviation	0.11	0.11	
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]	Reported SAR [W/kg]
			23230	23230
			H	
10MHz QPSK50% RB	Tune-up		23.00	Scaling factor*
	Measured Power [dBm]		22.25	1.19
	Front	1g SAR	0.294	0.35
		10g SAR	0.231	0.27
		Deviation	0.09	0.09
	Rear	1g SAR	0.427	0.51
		10g SAR	0.333	0.40
		Deviation	0.12	0.12
	Left edge	1g SAR	0.295	0.35
		10g SAR	0.209	0.25
		Deviation	0.04	0.04
	Right edge	1g SAR	0.33	0.39
		10g SAR	0.238	0.28
		Deviation	-0.11	-0.11
Bottom edge	1g SAR	0.071	0.08	
	10g SAR	0.039	0.05	
	Deviation	0.08	0.08	
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]	Reported SAR [W/kg]
			23230	23230
10MHz QPSK100% RB	Tune-up		23.00	Scaling factor*
	Measured Power [dBm]		22.21	1.20
	Front	1g SAR		
		10g SAR		
Deviation				
10MHz QPSK1RB B2	Rear	1g SAR	0.549	0.65
		10g SAR	0.421	0.50
		Deviation	0.17	0.17



14.3 Full SAR

Test Band	Channel	Frequency	Tune-Up	Measured Power	Test Position	Measured 10g SAR	Measured 1g SAR	Reported 10g SAR	Reported 1g SAR	Power Drift	Figure
GSM850	251	848.8 MHz	33.3	32.56	Right Cheek	0.237	0.316	0.28	0.37	0.03	Fig A.1
GSM850	251	848.8 MHz	27.5	27.07	Rear	0.368	0.48	0.41	0.53	-0.08	Fig A.2
PCS1900	512	1850.2 MHz	30.3	29.54	Left Cheek	0.162	0.258	0.19	0.31	0.06	Fig A.3
PCS1900	512	1850.2 MHz	28	27.26	Rear	0.335	0.505	0.40	0.60	-0.09	Fig A.4
WCDMA1900-BII	9538	1907.6 MHz	24	23.60	Right Cheek	0.315	0.527	0.35	0.58	0.19	Fig A.5
WCDMA1900-BII	9400	1880 MHz	24	23.67	Rear	0.349	0.635	0.38	0.69	-0.19	Fig A.6
WCDMA1700-BIV	1513	1752.6 MHz	24	23.52	Right Cheek	0.275	0.436	0.31	0.49	0.14	Fig A.7
WCDMA1700-BIV	1412	1732.4 MHz	24	23.55	Rear	0.495	0.736	0.55	0.82	-0.09	Fig A.8
WCDMA850-BV	4132	826.4 MHz	24	23.42	Right Cheek	0.25	0.336	0.29	0.38	0.09	Fig A.9
WCDMA850-BV	4182	835.4 MHz	24	23.41	Rear	0.387	0.503	0.44	0.58	-0.01	Fig A.10
LTE1900-FDD2	19100	1900 MHz	24.5	23.33	Left Cheek	0.33	0.535	0.43	0.70	-0.05	Fig A.11
LTE1900-FDD2	19100	1900 MHz	24.5	23.33	Rear	0.46	0.709	0.60	0.93	-0.09	Fig A.12
LTE1700-FDD4	20300	1745 MHz	24.5	23.35	Right Cheek	0.289	0.469	0.38	0.61	0.09	Fig A.13
LTE1700-FDD4	20300	1745 MHz	24.5	23.35	Rear	0.577	0.879	0.75	1.15	-0.09	Fig A.14
LTE850-FDD5	20525	836.5 MHz	24.5	23.29	Right Cheek	0.212	0.28	0.28	0.37	0.03	Fig A.15
LTE850-FDD5	20525	836.5 MHz	24.5	23.29	Rear	0.319	0.412	0.42	0.54	-0.03	Fig A.16
LTE2500-FDD7	20850	2510 MHz	23	22.25	Left Cheek	0.295	0.564	0.35	0.67	0.03	Fig A.17
LTE2500-FDD7	20850	2510 MHz	23	22.25	Rear	0.474	0.913	0.56	1.09	-0.02	Fig A.18
LTE700-FDD12	23095	707.5 MHz	24.5	23.40	Right Cheek	0.112	0.142	0.14	0.18	0.01	Fig A.19
LTE700-FDD12	23095	707.5 MHz	24.5	23.40	Rear	0.281	0.357	0.36	0.46	-0.02	Fig A.20
LTE750-FDD13	23230	782 MHz	24	23.27	Right Cheek	0.23	0.295	0.27	0.35	-0.03	Fig A.21
LTE750-FDD13	23230	782 MHz	24	23.27	Rear	0.439	0.562	0.52	0.66	-0.08	Fig A.22

14.4 WLAN Evaluation

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

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

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

Note3: 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.

Table 14-23 WLAN2450 Head Fast SAR

WLAN2450 #1 Head Fast SAR								
Ambient Temperature: 22.2				Liquid Temperature: 22.3				
Rate	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			11 2462 MHz	6 2437 MHz	1 2412 MHz	11	6	1
802.11b 1Mbps	Tune up		16.2	17	16.3	Scaling factor*		
	Slot Average Power [dBm]		15.14	16.69	14.49	1.28	1.07	1.52
	Left Cheek	1g Fast SAR		0.674			0.72	
		10g SAR		0.308			0.33	
		Deviation		-0.12			-0.12	
	Left Tilt	1g Fast SAR		0.465			0.50	
		10g SAR		0.232			0.25	
		Deviation		-0.12			-0.12	
	Right Cheek	1g Fast SAR		0.318			0.34	
		10g SAR		0.123			0.13	
		Deviation		0.08			0.08	
	Right Tilt	1g Fast SAR		0.283			0.30	
		10g SAR		0.084			0.09	
		Deviation		0.03			0.03	
802.11b 1Mbps B2	Left Cheek	1g Fast SAR		0.663			0.71	
		10g SAR		0.301			0.32	
		Deviation		0.03			0.03	

Table 14-24 WLAN2450 Head Full SAR

WLAN2450 #1 Head Full SAR								
Ambient Temperature: 22.3				Liquid Temperature: 22.2				
Rate	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			11 2462 MHz	6 2437 MHz	1 2412 MHz	11	6	1
802.11b 1Mbps	Tune up		16.2	17	16.3	Scaling factor*		
	Slot Average Power [dBm]		15.14	16.69	14.49	1.28	1.07	1.52
	Left Cheek	1g Full SAR		0.683			0.73	
		10g SAR		0.298			0.32	
		Deviation		-0.12			-0.12	
	Left Tilt	1g Full SAR		0.506			0.54	
		10g SAR		0.212			0.23	
		Deviation		-0.12			-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							
Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR(1g)(W/kg)	Scaled reported SAR(1g)(W/kg)	Figure
MHz	Ch.						
2437	6	Left Cheek	99.53%	100%	0.73	0.73	Fig.23

Table 14-25 WLAN2450 Body Fast SAR

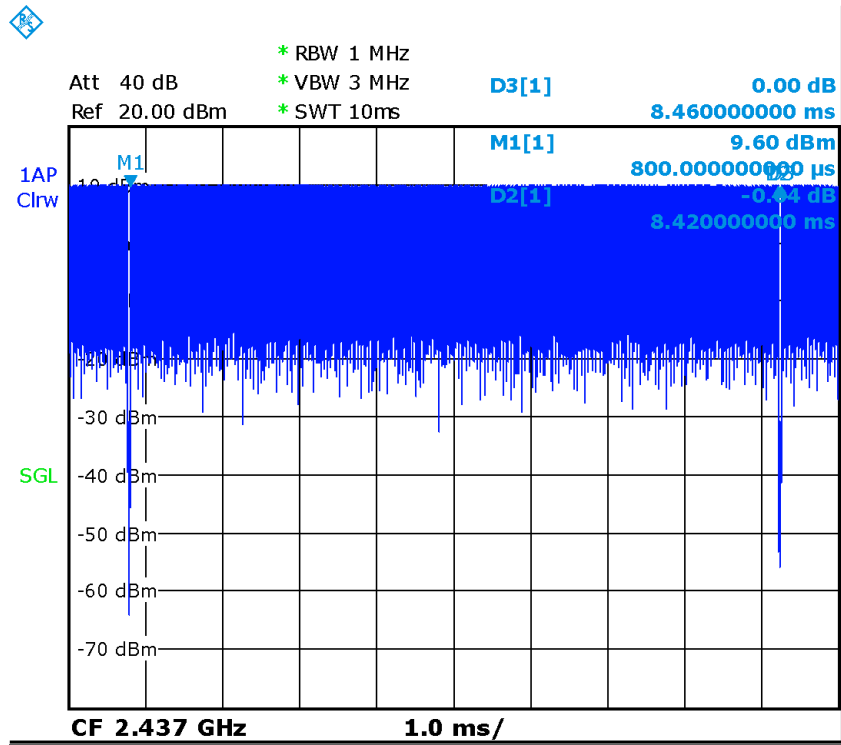
WLAN2450 #1 Body Fast SAR								
Ambient Temperature: 22.3				Liquid Temperature: 22.2				
Rate	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			11 2462 MHz	6 2437 MHz	1 2412 MHz	11	6	1
802.11b 1Mbps	Tune up		16.2	17	16.3	Scaling factor*		
	Slot Average Power [dBm]		15.14	16.69	14.49	1.28	1.07	1.52
	Front	1g Fast SAR		0.096			0.10	
		10g SAR		0.051			0.05	
		Deviation		-0.07			-0.07	
	Rear	1g Fast SAR		0.118			0.13	
		10g SAR		0.058			0.06	
		Deviation		-0.05			-0.05	
	Top edge	1g Fast SAR		0.085			0.09	
		10g SAR		0.045			0.05	
		Deviation		-0.15			-0.15	
	Right edge	1g Fast SAR		0.076			0.08	
		10g SAR		0.035			0.04	
		Deviation		0.13			0.13	
802.11b 1Mbps B2	Rear	1g Fast SAR		0.109			0.12	
		10g SAR		0.053			0.06	
		Deviation		0.04			0.04	

Table 14-26 WLAN2450 Body Full SAR

WLAN2450 #1 Body Full SAR								
Ambient Temperature: 22.3				Liquid Temperature: 22.2				
Rate	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			11 2462 MHz	6 2437 MHz	1 2412 MHz	11	6	1
802.11b 1Mbps	Tune up		16.2	17	16.3	Scaling factor*		
	Slot Average Power [dBm]		15.14	16.69	14.49	1.28	1.07	1.52
	Rear	1g Full SAR		0.12			0.13	
		10g SAR		0.06			0.06	
		Deviation		-0.05			-0.05	

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							
Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR(1g)(W/kg)	Scaled reported SAR(1g)(W/kg)	Figure
MHz	Ch.						
2437	6	Rear	99.53%	100%	0.13	0.13	Fig.24

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



Picture 14.1 Duty factor plot

15 SAR Measurement Variability

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

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

- 1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.
- 2) When the original highest measured SAR is ≥ 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 .

Mode	Channel	Test Position	Original SAR (W/kg)	First Repeated SAR(W/kg)	The Ratio
LTE1700-FDD4	20300	Rear	0.879	0.867	1.01
LTE2500-FDD7	20850	Rear	0.913	0.904	1.01

16 Measurement Uncertainty

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

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
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	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	$u_c = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$							9.55	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
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	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞

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

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

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
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
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 13, 2017	One year
02	Power meter	NRVD	102196	March 2, 2017	One year
03	Power sensor	NRV-Z5	100596		
04	Signal Generator	E4438C	MY49071430	January 13,2017	One Year
05	Amplifier	60S1G4	0331848	No Calibration Requested	
06	BTS	E5515C	MY50263375	January 16, 2017	One year
07	BTS	CMW500	149646	October 31,2017	One year
08	E-field Probe	SPEAG EX3DV4	3846	January 13,2017	One year
09	DAE	SPEAG DAE4	1331	January19, 2017	One year
10	Dipole Validation Kit	SPEAG D750V3	1017	July 19,2017	One year
11	Dipole Validation Kit	SPEAG D835V2	4d069	July 19,2017	One year
12	Dipole Validation Kit	SPEAG D1750V2	1003	July 21,2017	One year
13	Dipole Validation Kit	SPEAG D1900V2	5d101	July 26,2017	One year
14	Dipole Validation Kit	SPEAG D2450V2	853	July 21,2017	One year
15	Dipole Validation Kit	SPEAG D2600V2	1012	July 21,2017	One year

END OF REPORT BODY

ANNEX A Graph Results

GSM850_CH251 Right Cheek

Date: 12/20/2017

Electronics: DAE4 Sn1331

Medium: Head 835 MHz

Medium parameters used: $f = 848.8$ MHz; $\sigma = 0.928$ mho/m; $\epsilon_r = 41.73$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.2°C, Liquid Temperature: 22.3°C

Communication System: GSM850 848.8 MHz Duty Cycle: 1:8.3

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

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

Maximum value of SAR (interpolated) = 0.346 W/kg

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

Reference Value = 3.923 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.41 W/kg

SAR(1 g) = 0.316 W/kg; SAR(10 g) = 0.237 W/kg

Maximum value of SAR (measured) = 0.351 W/kg

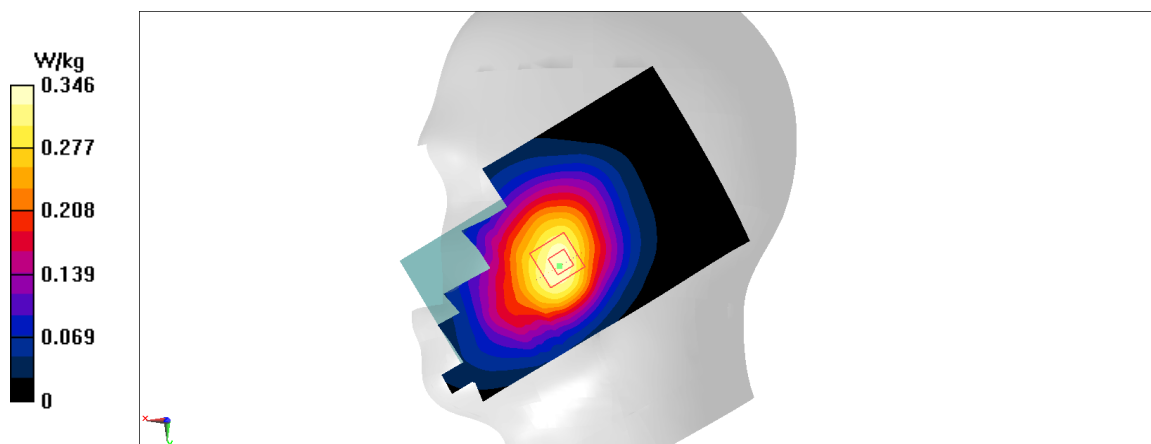


Fig A.1

GSM850_CH251 Rear

Date: 12/20/2017

Electronics: DAE4 Sn1331

Medium: Body 835 MHz

Medium parameters used: $f = 848.8$ MHz; $\sigma = 1$ mho/m; $\epsilon_r = 54.11$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.2°C, Liquid Temperature: 22.3°C

Communication System: GSM850 848.8 MHz Duty Cycle: 1:2

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

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

Maximum value of SAR (interpolated) = 0.522 W/kg

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

Reference Value = 21.95 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.615 W/kg

SAR(1 g) = 0.48 W/kg; SAR(10 g) = 0.368 W/kg

Maximum value of SAR (measured) = 0.503 W/kg

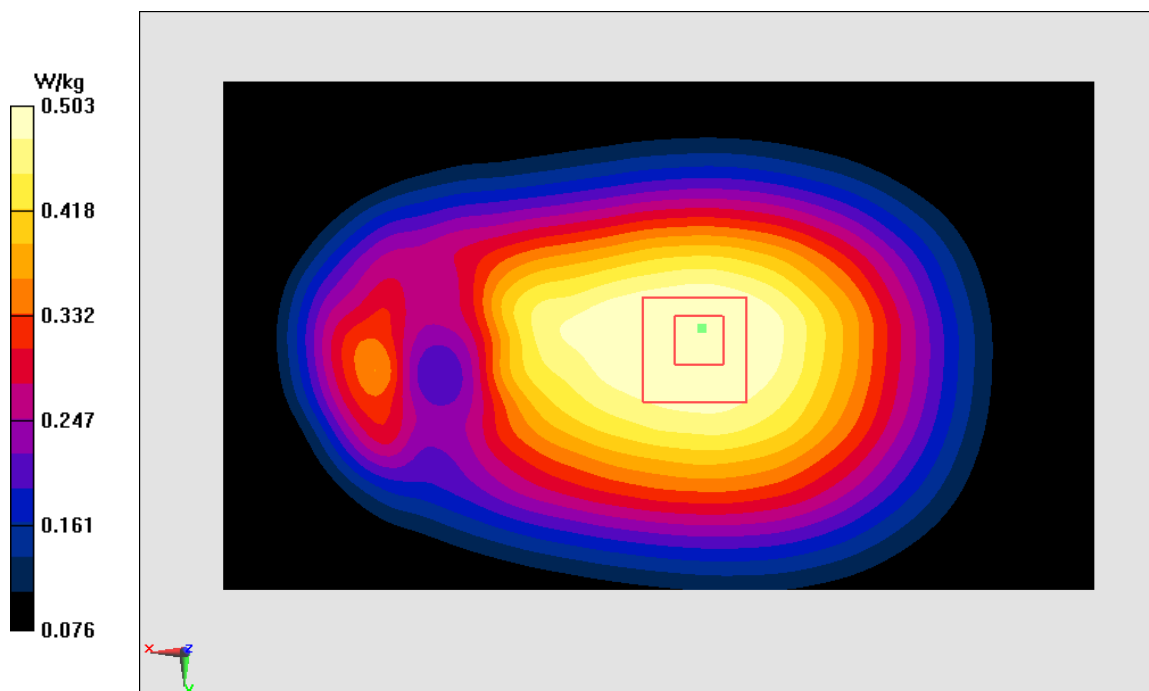


Fig A.2

PCS1900_CH512 Left Cheek

Date: 12/22/2017

Electronics: DAE4 Sn1331

Medium: Head 1900 MHz

Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.338$ mho/m; $\epsilon_r = 40.32$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.2°C, Liquid Temperature: 22.3°C

Communication System: PCS1900 1850.2 MHz Duty Cycle: 1:8.3

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

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

Maximum value of SAR (interpolated) = 0.321 W/kg

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

Reference Value = 4.25 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.4 W/kg

SAR(1 g) = 0.258 W/kg; SAR(10 g) = 0.162 W/kg

Maximum value of SAR (measured) = 0.307 W/kg

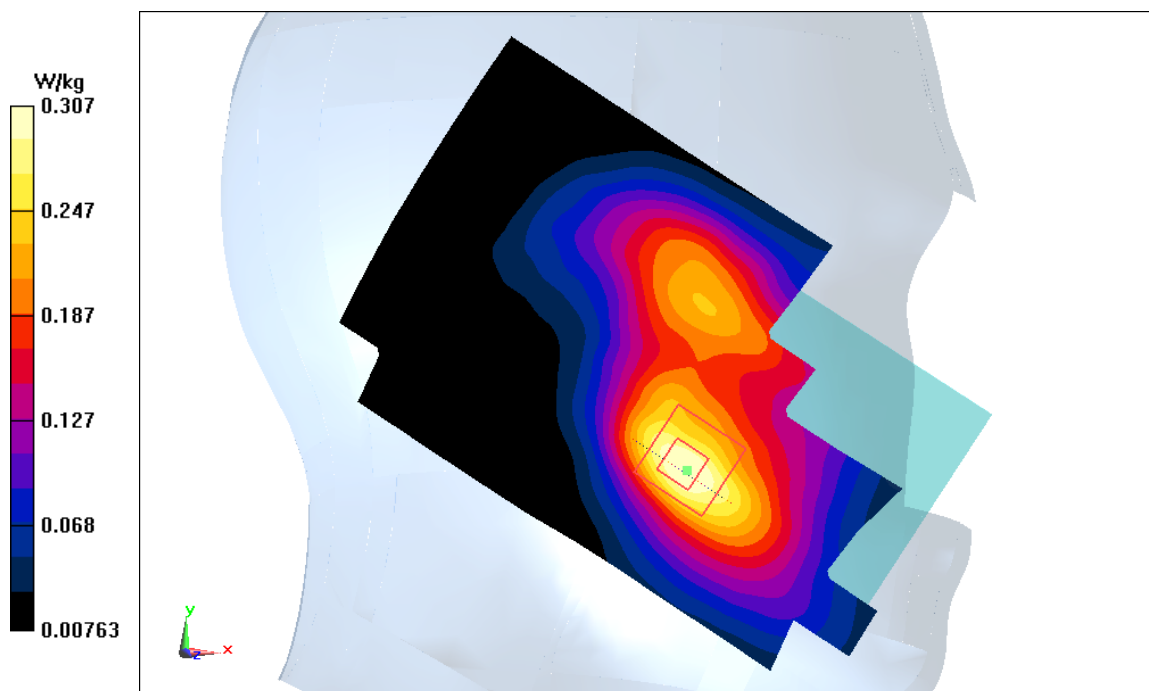


Fig A.3

PCS1900_CH512 Rear

Date: 12/22/2017

Electronics: DAE4 Sn1331

Medium: Body 1900 MHz

Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.485$ mho/m; $\epsilon_r = 53.94$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.2°C, Liquid Temperature: 22.3°C

Communication System: PCS1900 1850.2 MHz Duty Cycle: 1:4

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

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

Maximum value of SAR (interpolated) = 0.602 W/kg

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

Reference Value = 15.1 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.812 W/kg

SAR(1 g) = 0.505 W/kg; SAR(10 g) = 0.335 W/kg

Maximum value of SAR (measured) = 0.576 W/kg

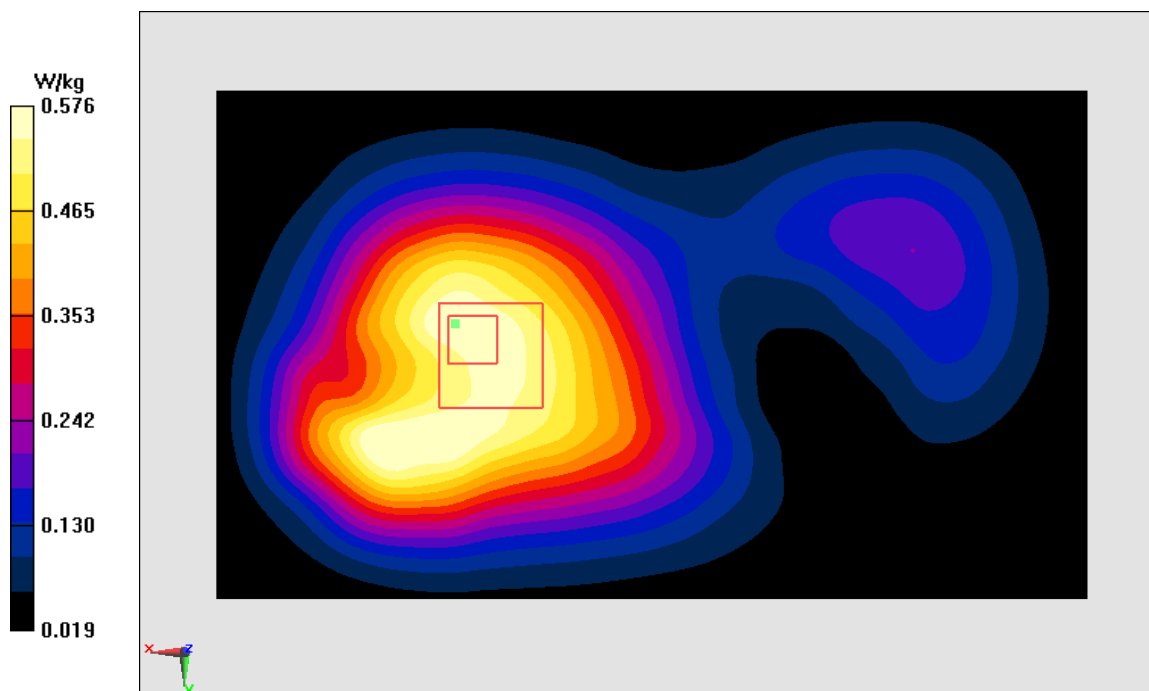


Fig A.4

WCDMA1900-BII_CH9538 Right Cheek

Date: 12/22/2017

Electronics: DAE4 Sn1331

Medium: Head 1900 MHz

Medium parameters used: $f = 1907.6$ MHz; $\sigma = 1.394$ mho/m; $\epsilon_r = 40.25$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.2°C, Liquid Temperature: 22.3°C

Communication System: WCDMA1900-BII 1907.6 MHz Duty Cycle: 1:1

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

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

Maximum value of SAR (interpolated) = 0.649 W/kg

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

Reference Value = 7.54 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 0.822 W/kg

SAR(1 g) = 0.527 W/kg; SAR(10 g) = 0.315 W/kg

Maximum value of SAR (measured) = 0.624 W/kg

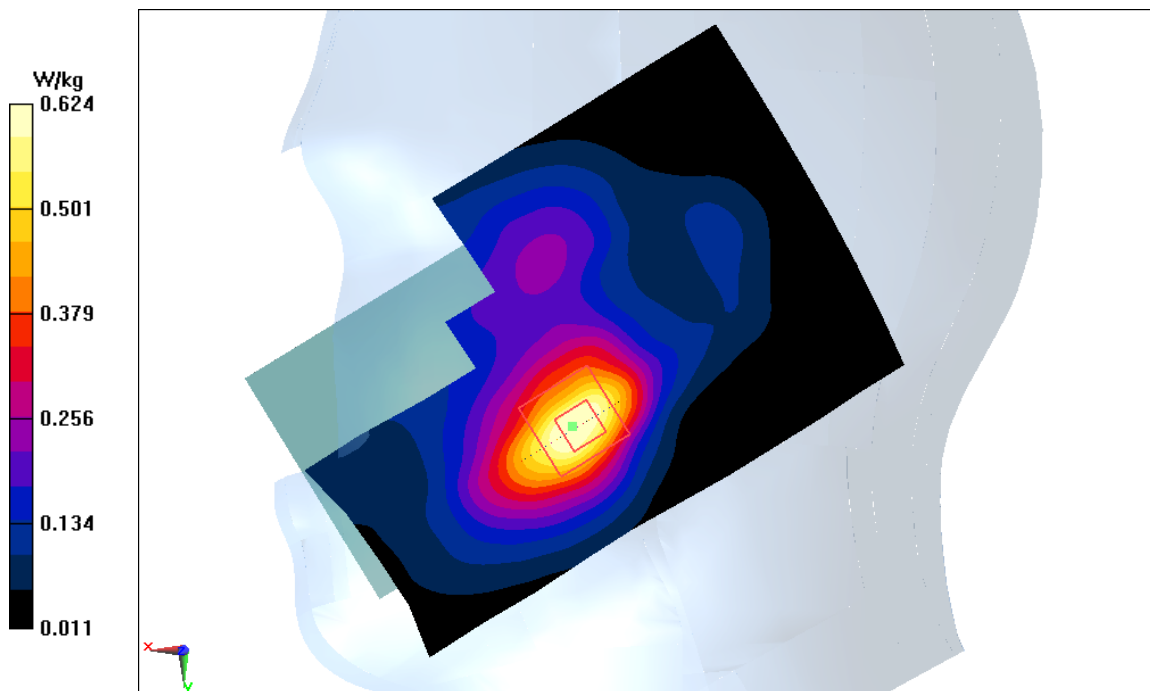


Fig A.5

WCDMA1900-BII_CH9400 Rear

Date: 12/22/2017

Electronics: DAE4 Sn1331

Medium: Body 1900 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.514$ mho/m; $\epsilon_r = 53.9$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.2°C, Liquid Temperature: 22.3°C

Communication System: WCDMA1900-BII 1880 MHz Duty Cycle: 1:1

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

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

Maximum value of SAR (interpolated) = 0.816 W/kg

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

Reference Value = 12.05 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 1.15 W/kg

SAR(1 g) = 0.635 W/kg; SAR(10 g) = 0.349 W/kg

Maximum value of SAR (measured) = 0.799 W/kg

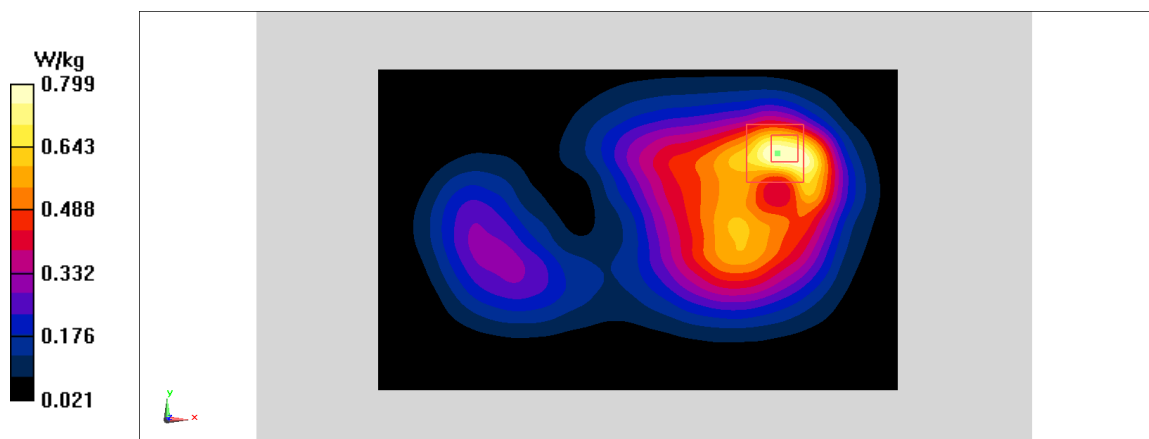


Fig A.6

WCDMA1700-BIV_CH1513 Right Cheek

Date: 12/21/2017

Electronics: DAE4 Sn1331

Medium: Head 1750 MHz

Medium parameters used: $f = 1752.6$ MHz; $\sigma = 1.368$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.2°C, Liquid Temperature: 22.3°C

Communication System: WCDMA1700-BIV 1752.6 MHz Duty Cycle: 1:1

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

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

Maximum value of SAR (interpolated) = 0.531 W/kg

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

Reference Value = 6.575 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.646 W/kg

SAR(1 g) = 0.436 W/kg; SAR(10 g) = 0.275 W/kg

Maximum value of SAR (measured) = 0.508 W/kg

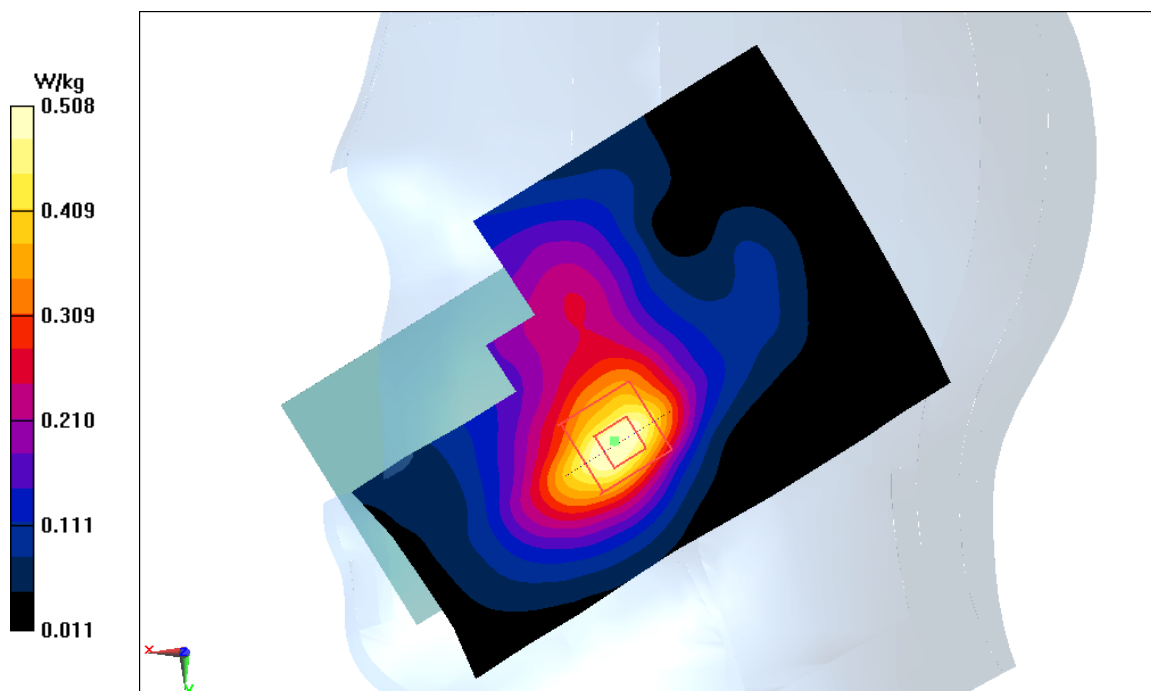


Fig A.7