

124(5620 MHz)	11.28	12.00
128(5640 MHz)	11.14	12.00
132(5660 MHz)	10.87	11.00
136(5680 MHz)	10.70	11.00
140(5700 MHz)	10.53	11.00
149(5745 MHz)	10.30	11.00
153(5765 MHz)	10.43	11.00
157(5785 MHz)	10.46	11.00
161(5805 MHz)	10.44	11.00
165(5825 MHz)	10.59	11.00

Table 11- 17 WLAN 5G 11n – HT40

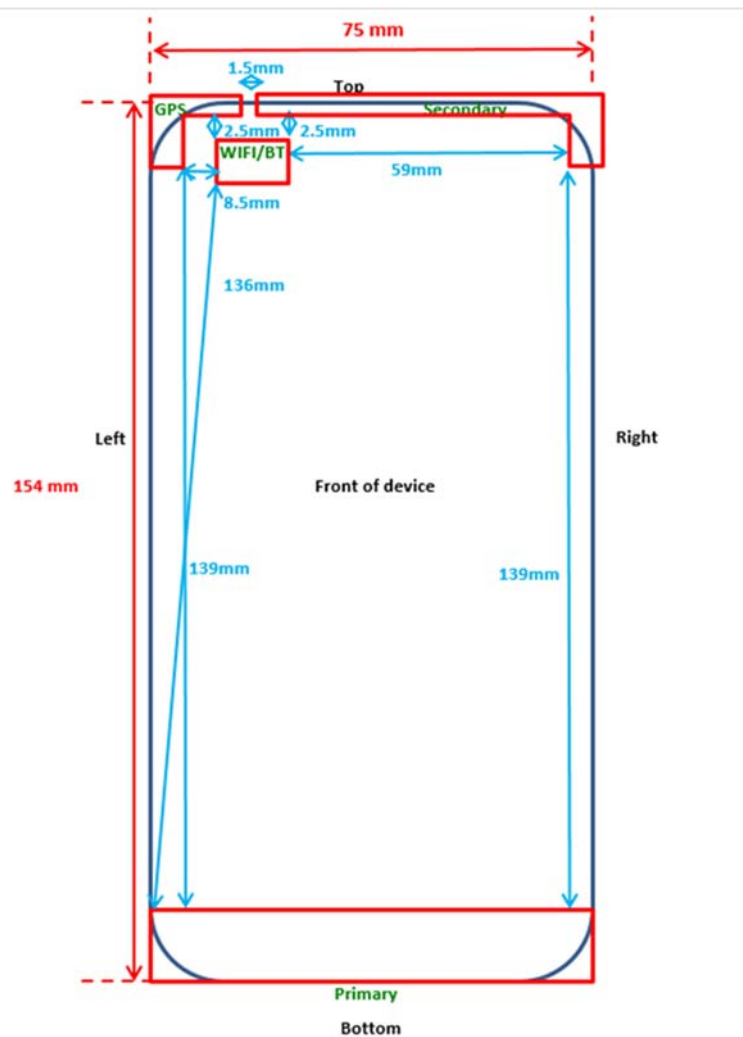
Channel\data rate	MCS0	Tune up
38(5190 MHz)	11.44	12.00
46(5230 MHz)	11.22	12.00
54(5270 MHz)	10.65	11.00
62(5310 MHz)	10.37	11.00
102(5510 MHz)	11.21	12.00
110(5550 MHz)	11.28	12.00
118(5590 MHz)	10.99	11.00
126(5630 MHz)	10.79	11.00
134(5670 MHz)	10.28	11.00
151(5755 MHz)	10.01	11.00
159(5795 MHz)	10.12	11.00

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	Yes	No	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	9.5	8.91	Yes
		Body	9.6	9.5	8.91	Yes
2.4GHz WLAN	2.45	Head	9.58	16	39.81	No
		Body	9.58	16	39.81	No
5GHz WLAN	5.25	Head	6.58	13.5	22.39	No
		Body	13.16	13.5	22.39	No
	5.6	Head	6.34	12.9	19.50	No
		Body	12.68	12.9	19.50	No
	5.75	Head	6.23	12	15.85	No
		Body	12.46	12	15.85	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	Right hand, Touch cheek	0.34	1.24	1.58
Highest reported SAR value for Body	Left edge	0.62	0.03	0.65

Note1: we have evaluated and chose the highest value of both main antennae in the above table

Note2: we have evaluated and chose the highest value of WiFi 2.4G and 5G in the above table

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	0.53	0.19	0.72
Maximum reported SAR value for Body	Left edge	0.62	0.09	0.71

[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	9.5	8.91	0.19
Bluetooth	2.441	Body	10	9.5	8.91	0.09

* - 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 10 mm 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 GSM850/1900	1:2
WCDMA<E FDD	1:1
LTE TDD	1:1.58

14.1 Evaluation of multi-batteries and SIM slots

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

Note:

The battery of HE316 is B1.

The battery of HE317 is B2.

The SIM1 is S1.

The SIM2 is S2.

The headset of CAB5422B-N01-DG is H1.

frequency		Mode/Band	Side	Position	BatteryType	1g SAR (W/kg)	PowerDrift
MHz	Channel						
2560	21350	LTE Band7	Left	Cheek	HE316	0.357	0.04
2560	21350	LTE Band7	Left	Cheek	HE317	0.368	0.06

Note: According to the values in the above table, the battery, HE317, 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					
2560	21350	LTE Band7	Rear	HE316	0.329	-0.08
2560	21350	LTE Band7	Rear	HE317	0.382	-0.04

Note: According to the values in the above table, the battery, HE317, is the primary battery. We'll perform the Body measurement with this battery and retest on highest value point with others.

frequency		Mode/Band	Side	Position	SIM Card	1g SAR (W/kg)	PowerDrift
MHz	Channel						
2560	21350	LTE Band7	Left	Cheek	SIM1	0.368	0.06
2560	21350	LTE Band7	Left	Cheek	SIM2	0.361	0.01

Note: According to the values in the above table, the slot, S1, is the primary slot. We'll perform the head measurement with this slot and retest on highest value point with others.

frequency		Mode/Band	Position	SIM Card	1g SAR (W/kg)	PowerDrift
MHz	Channel					
2560	21350	LTE Band7	Rear	SIM1	0.382	-0.04
2560	21350	LTE Band7	Rear	SIM2	0.338	0.12

Note: According to the values in the above table, the slot, S1, is the primary slot. We'll perform the body measurement with this slot and retest on highest value point with others.

14.2 SAR results

Table 14-1 GSM850 Head

GSM850 Head									
Ambient Temperature:			22.5			Liquid Temperature:			23.3
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		33.60	33.60	33.60	Scaling factor*			
	Slot Average Power [dBm]		33.55	33.55	33.49	1.01	1.01	1.03	
	Left Cheek	1g SAR		0.102			0.10		
		10g SAR		0.081			0.08		
		Deviation		0.01			0.01		
	Left Tilt	1g SAR		0.066			0.07		
		10g SAR		0.053			0.05		
		Deviation		0.03			0.03		
	Right Cheek	1g SAR	0.143	0.163	0.178	0.14	0.16	0.18	
		10g SAR	0.109	0.123	0.138	0.11	0.12	0.14	
		Deviation	0.03	0.05	-0.06	0.03	0.05	-0.06	
	Right Tilt	1g SAR		0.065			0.07		
10g SAR			0.051			0.05			
Deviation			-0.09			-0.09			
GSM B1	Right Cheek	1g SAR			0.17			0.17	
		10g SAR			0.13			0.13	
		Deviation			0.12			0.12	
SIM 2	Right Cheek	1g SAR			0.162			0.17	
		10g SAR			0.121			0.12	
		Deviation			0.04			0.04	

Table 14-2 GSM850 Body

GSM850 Body									
Ambient Temperature:			22.5			Liquid Temperature:			23.3
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		29.00	29.00	29.00	Scaling factor*			
	Slot Average Power [dBm]		28.70	28.76	28.80	1.07	1.06	1.05	
	Front	1g SAR		0.187			0.20		
		10g SAR		0.118			0.12		
		Deviation		-0.09			-0.09		
	Rear	1g SAR		0.141			0.15		
		10g SAR		0.112			0.12		
		Deviation		-0.16			-0.16		
	Bottom edge	1g SAR		0.158			0.17		
		10g SAR		0.0842			0.09		
		Deviation		0.11			0.11		
	Left edge	1g SAR		0.131			0.14		
		10g SAR		0.0904			0.10		
		Deviation		0.16			0.16		
	Right edge	1g SAR	0.121	0.236	0.305	0.13	0.25	0.32	
		10g SAR	0.139	0.167	0.209	0.15	0.18	0.22	
		Deviation	0.1	0.14	0.08	0.10	0.14	0.08	
	EGPRS GMSK 4 Txslots	Tune-up		29.00	29.00	29.00	Scaling factor*		
Slot Average Power [dBm]		28.69	28.76	28.79	1.07	1.06	1.05		
Right edge		1g SAR			0.265			0.28	
		10g SAR			0.175			0.18	
	Deviation			0.08			0.08		
GSM B1	Right edge	1g SAR			0.299			0.31	
		10g SAR			0.202			0.21	
		Deviation			0.1			0.10	
SIM 2	Right edge	1g SAR			0.288			0.30	
		10g SAR			0.193			0.20	
		Deviation			-0.09			-0.09	

Table 14-3 PCS1900 Head

PCS1900 Head									
Ambient Temperature:			22.5			Liquid Temperature:			23.3
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]			
			CH810 1909.8 MHz	CH661 1880 MHz	CH512 1850.2 MHz	CH810 1909.8 MHz	CH661 1880 MHz	CH512 1850.2 MHz	
GSM	Tune-up		31.00	31.00	31.00	Scaling factor*			
	Slot Average Power [dBm]		30.81	30.92	30.99	1.05	1.02	1.00	
	Left Cheek	1g SAR	0.176	0.19	0.184	0.18	0.19	0.18	
		10g SAR	0.112	0.122	0.118	0.12	0.12	0.12	
		Deviation	0.11	-0.02	0.09	0.11	-0.02	0.09	
	Left Tilt	1g SAR		0.046			0.05		
		10g SAR		0.031			0.03		
		Deviation		0.14			0.14		
	Right Cheek	1g SAR		0.089			0.09		
		10g SAR		0.061			0.06		
		Deviation		-0.08			-0.08		
	Right Tilt	1g SAR		0.052			0.05		
10g SAR			0.043			0.04			
Deviation			0.1			0.10			
GSM B1	Left Cheek	1g SAR		0.181			0.18		
		10g SAR		0.119			0.12		
		Deviation		0.06			0.06		
SIM 2	Left Cheek	1g SAR		0.179			0.18		
		10g SAR		0.115			0.12		
		Deviation		0.12			0.12		

Table 14-4 PCS1900 Body

PCS1900 Body									
Ambient Temperature:			22.5			Liquid Temperature:			23.3
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]			
			CH810 1909.8 MHz	CH661 1880 MHz	CH512 1850.2 MHz	CH810 1909.8 MHz	CH661 1880 MHz	CH512 1850.2 MHz	
GPRS 4 Txslots	Tune-up		28.00	28.00	28.00	Scaling factor*			
	Slot Average Power [dBm]		27.96	27.83	27.85	1.01	1.04	1.03	
	Front	1g SAR		0.402			0.42		
		10g SAR		0.238			0.25		
		Deviation		0.01			0.01		
	Rear	1g SAR		0.522			0.54		
		10g SAR		0.307			0.32		
		Deviation		0.14			0.14		
	Bottom edge	1g SAR		0.513			0.53		
		10g SAR		0.271			0.28		
		Deviation		0.12			0.12		
	Left edge	1g SAR	0.496	0.53	0.558	0.50	0.55	0.58	
10g SAR		0.286	0.302	0.338	0.29	0.31	0.35		
Deviation		-0.03	0.07	-0.12	-0.03	0.07	-0.12		
Right edge	1g SAR		0.0495			0.05			
	10g SAR		0.0271			0.03			
	Deviation		0.13			0.13			
EGPRS GMSK 4 Txslots	Tune-up		28.00	28.00	28.00	Scaling factor*			
	Slot Average Power [dBm]		27.94	27.81	27.85	1.01	1.05	1.04	
	Left edge	1g SAR			0.527			0.55	
		10g SAR			0.291			0.30	
Deviation				-0.11			-0.11		
GSM B1	Left edge	1g SAR		0.521			0.54		
		10g SAR		0.282			0.29		
		Deviation		-0.04			-0.04		
SIM 2	Left edge	1g SAR		0.522			0.54		
		10g SAR		0.284			0.29		
		Deviation		-0.06			-0.06		

Table 14-5 WCDMA1900-BII Head

WCDMA1900-BII Head									
Ambient Temperature:			22.5			Liquid Temperature:			23.3
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		24.50	24.50	24.50	Scaling factor*			
	Slot Average Power [dBm]		24.24	23.99	24.02	1.06	1.12	1.12	
	Left Cheek	1g SAR	0.499	0.466	0.47	0.53	0.52	0.52	
		10g SAR	0.315	0.264	0.269	0.33	0.30	0.30	
		Deviation	0.06	0.11	0.04	0.06	0.11	0.04	
	Left Tilt	1g SAR		0.164			0.18		
		10g SAR		0.1			0.11		
		Deviation		-0.1			-0.10		
	Right Cheek	1g SAR		0.304			0.34		
		10g SAR		0.239			0.27		
		Deviation		0.09			0.09		
	Right Tilt	1g SAR		0.145			0.16		
		10g SAR		0.092			0.10		
		Deviation		0.16			0.16		
RMC B1	Left Cheek	1g SAR	0.472			0.50			
		10g SAR	0.273			0.29			
		Deviation	-0.08			-0.08			
SIM 2	Left Cheek	1g SAR	0.466			0.50			
		10g SAR	0.265			0.28			
		Deviation	-0.12			-0.12			

Table 14-6 WCDMA1900-BII Body

WCDMA1900-BII Body									
Ambient Temperature:			22.5			Liquid Temperature:			23.3
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		24.50	24.50	24.50	Scaling factor*			
	Slot Average Power [dBm]		24.24	23.99	24.02	1.06	1.12	1.12	
	Front	1g SAR		0.526			0.59		
		10g SAR		0.291			0.33		
		Deviation		0.01			0.01		
	Rear	1g SAR		0.464			0.52		
		10g SAR		0.245			0.28		
		Deviation		-0.06			-0.06		
	Bottom edge	1g SAR		0.465			0.52		
		10g SAR		0.231			0.26		
		Deviation		0.17			0.17		
	Left edge	1g SAR	0.416	0.549	0.502	0.44	0.62	0.56	
		10g SAR	0.136	0.332	0.275	0.14	0.37	0.31	
		Deviation	0.04	-0.16	0.18	0.04	-0.16	0.18	
Right edge	1g SAR		0.0674			0.08			
	10g SAR		0.0366			0.04			
	Deviation		0.09			0.09			
RMC B1	Left edge	1g SAR		0.526			0.59		
		10g SAR		0.291			0.33		
		Deviation		0.09			0.09		
SIM 2	Left edge	1g SAR		0.515			0.58		
		10g SAR		0.285			0.32		
		Deviation		-0.01			-0.01		

Table 14-7 WCDMA1700-BIV Head

WCDMA1700-BIV Head								
Ambient Temperature: 22.5						Liquid Temperature: 23.3		
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		24.50	24.50	24.50	Scaling factor*		
	Slot Average Power [dBm]		24.03	24.01	24.11	1.11	1.12	1.10
	Left Cheek	1g SAR	0.268	0.208	0.202	0.30	0.23	0.22
		10g SAR	0.178	0.137	0.136	0.20	0.15	0.15
		Deviation	0.18	0.02	0.11	0.18	0.02	0.11
	Left Tilt	1g SAR		0.195			0.22	
		10g SAR		0.144			0.16	
		Deviation		-0.09			-0.09	
	Right Cheek	1g SAR		0.201			0.23	
		10g SAR		0.152			0.17	
		Deviation		0.12			0.12	
	Right Tilt	1g SAR		0.101			0.11	
		10g SAR		0.07			0.08	
		Deviation		0.06			0.06	
	RMC B1	Left Cheek	1g SAR	0.247			0.28	
10g SAR			0.169			0.19		
Deviation			0.05			0.05		
SIM 2	Left Cheek	1g SAR	0.261			0.29		
		10g SAR	0.171			0.19		
		Deviation	0.1			0.10		

Table 14-8 WCDMA1700-BIV Body

WCDMA1700-BIV Body									
Ambient Temperature: 22.5						Liquid Temperature: 23.3			
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		24.50	24.50	24.50	Scaling factor*			
	Slot Average Power [dBm]		24.03	24.01	24.11	1.11	1.12	1.10	
	Front	1g SAR		0.253			0.28		
		10g SAR		0.15			0.17		
		Deviation		0.11			0.11		
	Rear	1g SAR		0.235			0.26		
		10g SAR		0.136			0.15		
		Deviation		-0.09			-0.09		
	Bottom edge	1g SAR	0.375	0.296	0.258	0.42	0.33	0.28	
		10g SAR	0.2	0.155	0.133	0.22	0.17	0.15	
		Deviation	-0.18	0.02	-0.05	-0.18	0.02	-0.05	
	Left edge	1g SAR		0.203			0.23		
		10g SAR		0.104			0.12		
		Deviation		-0.11			-0.11		
	Right edge	1g SAR		0.054			0.06		
		10g SAR		0.03			0.03		
		Deviation		-0.11			-0.11		
	RMC B1	Bottom edge	1g SAR	0.343			0.38		
			10g SAR	0.165			0.18		
			Deviation	0.07			0.07		
	SIM 2	Bottom edge	1g SAR	0.347			0.39		
10g SAR			0.169			0.19			
Deviation			0.16			0.16			

Table 14-9 WCDMA850-BV Head

WCDMA850-BV Head									
Ambient Temperature:			22.5			Liquid Temperature:			23.3
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]			
			CH4233 846.6 MHz	CH4715 835.4 MHz	CH4132 826.4 MHz	CH4233 846.6 MHz	CH4715 835.4 MHz	CH4132 826.4 MHz	
RMC	Tune-up		24.50	24.50	24.50	Scaling factor*			
	Slot Average Power [dBm]		24.42	24.39	24.50	1.02	1.02	1.00	
	Left Cheek	1g SAR		0.145			0.15		
		10g SAR		0.106			0.11		
		Deviation		0.03			0.03		
	Left Tilt	1g SAR		0.136			0.14		
		10g SAR		0.075			0.08		
		Deviation		-0.01			-0.01		
	Right Cheek	1g SAR	0.174	0.22	0.209	0.18	0.23	0.21	
		10g SAR	0.121	0.17	0.146	0.12	0.17	0.15	
		Deviation	0.09	-0.05	0.03	0.09	-0.05	0.03	
	Right Tilt	1g SAR		0.086			0.09		
10g SAR			0.04			0.04			
Deviation			0.12			0.12			
RMC B1	Right Cheek	1g SAR		0.203			0.21		
		10g SAR		0.116			0.12		
		Deviation		0.01			0.01		
SIM 2	Right Cheek	1g SAR		0.198			0.20		
		10g SAR		0.113			0.12		
		Deviation		0.03			0.03		

Table 14-10 WCDMA850-BV Body

WCDMA850-BV Body									
Ambient Temperature:			22.5			Liquid Temperature:			23.3
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]			
			CH4233 846.6 MHz	CH4715 835.4 MHz	CH4132 826.4 MHz	CH4233 846.6 MHz	CH4715 835.4 MHz	CH4132 826.4 MHz	
RMC	Tune-up		24.50	24.50	24.50	Scaling factor*			
	Slot Average Power [dBm]		24.42	24.39	24.50	1.02	1.02	1.00	
	Front	1g SAR		0.244			0.25		
		10g SAR		0.182			0.19		
		Deviation		0.1			0.10		
	Rear	1g SAR		0.268			0.27		
		10g SAR		0.201			0.21		
		Deviation		0.08			0.08		
	Bottom edge	1g SAR		0.216			0.22		
		10g SAR		0.107			0.11		
		Deviation		0.16			0.16		
	Left edge	1g SAR		0.191			0.20		
10g SAR			0.126			0.13			
Deviation			0.03			0.03			
Right edge	1g SAR	0.331	0.374	0.318	0.34	0.38	0.32		
	10g SAR	0.219	0.256	0.211	0.22	0.26	0.21		
	Deviation	-0.1	-0.12	0.08	-0.10	-0.12	0.08		
SIM2	Right edge	1g SAR		0.348			0.36		
		10g SAR		0.227			0.23		
		Deviation		-0.07			-0.07		
RMC B1	Right edge	1g SAR		0.359			0.37		
		10g SAR		0.237			0.24		
		Deviation		0.1			0.10		

Table 14-11 LTE1900-FDD2 Head

LTE1900-FDD2 Head								
Ambient Temperature: 22.5			Liquid Temperature: 23.3					
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			19100 M	18900 H	18700 M	19100 M	18900 H	18700 M
20MHz QPSK1RB	Tune-up		24.90	24.90	24.90	Scaling factor*		
	Measured Power [dBm]		24.49	24.02	24.25	1.10	1.22	1.16
	Left Cheek	1g SAR	0.328			0.36		
		10g SAR	0.208			0.23		
		Deviation	-0.06			-0.06		
	Left Tilt	1g SAR	0.122			0.13		
		10g SAR	0.085			0.09		
		Deviation	0.08			0.08		
	Right Cheek	1g SAR	0.185			0.20		
		10g SAR	0.131			0.14		
		Deviation	0.11			0.11		
	Right Tilt	1g SAR	0.119			0.13		
		10g SAR	0.065			0.07		
Deviation		-0.06			-0.06			
TRUE	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			19100 H	18900 H	18700 L	19100 H	18900 H	18700 L
20MHz QPSK50%RB	Tune-up		23.90	23.90	23.90	Scaling factor*		
	Measured Power [dBm]		23.20	23.11	23.12	1.18	1.20	1.20
	Left Cheek	1g SAR	0.249			0.29		
		10g SAR	0.159			0.19		
		Deviation	0.04			0.04		
	Left Tilt	1g SAR	0.091			0.11		
		10g SAR	0.063			0.07		
		Deviation	0.18			0.18		
	Right Cheek	1g SAR	0.151			0.18		
		10g SAR	0.107			0.13		
		Deviation	0.06			0.06		
	Right Tilt	1g SAR	0.087			0.10		
		10g SAR	0.047			0.06		
Deviation		0.11			0.11			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			19100	18900	18700	19100	18900	18700
20MHz QPSK100%RB	Tune-up		23.90	23.90	23.90	Scaling factor*		
	Measured Power [dBm]		23.13	23.19	23.13	1.19	1.18	1.19
	Left Cheek	1g SAR						
		10g SAR						
Deviation								
20MHz QPSK1RB B1	Left Cheek	1g SAR	0.304			0.33		
		10g SAR	0.197			0.22		
		Deviation	-0.12			-0.12		
SIM 2	Left Cheek	1g SAR	0.311			0.34		
		10g SAR	0.202			0.22		
		Deviation	-0.09			-0.09		

Table 14-12 LTE1900-FDD2 Body

LTE1900-FDD2 Body								
Ambient Temperature: 22.5				Liquid Temperature: 23.3				
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			19100	18900	18700	19100	18900	18700
			M	H	M	M	H	M
20MHz QPSK1RB	Tune-up		24.90	24.90	24.90	Scaling factor*		
	Measured Power [dBm]		24.49	24.02	24.25	1.10	1.22	1.16
	Front	1g SAR	0.426			0.47		
		10g SAR	0.233			0.26		
		Deviation	-0.03			-0.03		
	Rear	1g SAR	0.335			0.37		
		10g SAR	0.192			0.21		
		Deviation	-0.01			-0.01		
	Bottom edge	1g SAR	0.327			0.36		
		10g SAR	0.161			0.18		
		Deviation	0.18			0.18		
	Left edge	1g SAR	0.371			0.41		
		10g SAR	0.204			0.22		
		Deviation	0.04			0.04		
	Right edge	1g SAR	0.0532			0.06		
10g SAR		0.0374			0.04			
Deviation		-0.14			-0.14			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			19100	18900	18700	19100	18900	18700
			H	H	L			
20MHz QPSK50%RB	Tune-up		23.90	23.90	23.90	Scaling factor*		
	Measured Power [dBm]		23.20	23.11	23.12	1.18	1.20	1.20
	Front	1g SAR	0.333			0.39		
		10g SAR	0.183			0.22		
		Deviation	0.09			0.09		
	Rear	1g SAR	0.274			0.32		
		10g SAR	0.157			0.18		
		Deviation	-0.01			-0.01		
	Bottom edge	1g SAR	0.258			0.30		
		10g SAR	0.127			0.15		
		Deviation	-0.06			-0.06		
	Left edge	1g SAR	0.306			0.36		
		10g SAR	0.169			0.20		
		Deviation	-0.06			-0.06		
	Right edge	1g SAR	0.048			0.06		
10g SAR		0.0268			0.03			
Deviation		0.11			0.11			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			19100	18900	18700	19100	18900	18700
20MHz QPSK100%RB	Tune-up		23.90	23.90	23.90	Scaling factor*		
	Measured Power [dBm]		23.13	23.19	23.13	1.19	1.18	1.19
20MHz QPSK1RB B1	Front	1g SAR	0.412			0.45		
		10g SAR	0.221			0.24		
		Deviation	0.11			0.11		
SIM 2	Front	1g SAR	0.407			0.45		
		10g SAR	0.214			0.24		
		Deviation	0.05			0.05		

Table 14-13 LTE1700-FDD4 Head

LTE1700-FDD4 Head								
Ambient Temperature: 22.5			Liquid Temperature: 23.3					
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			20300 H	20175 H	20050 M	20300 H	20175 H	20050 M
20MHz QPSK1RB	Tune-up		24.80	24.80	24.80	Scaling factor*		
	Measured Power [dBm]		24.48	24.11	24.72	1.08	1.17	1.02
	Left Cheek	1g SAR			0.13			0.13
		10g SAR			0.085			0.09
		Deviation			-0.12			-0.12
	Left Tilt	1g SAR			0.057			0.06
		10g SAR			0.035			0.04
		Deviation			0.08			0.08
	Right Cheek	1g SAR			0.06			0.06
		10g SAR			0.035			0.04
		Deviation			-0.06			-0.06
	Right Tilt	1g SAR			0.059			0.06
		10g SAR			0.035			0.04
Deviation				-0.06			-0.06	
TRUE	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			20300 M	20175 H	20050 L	20300 M	20175 H	20050 L
20MHz QPSK50%RB	Tune-up		23.80	23.80	23.80	Scaling factor*		
	Measured Power [dBm]		23.35	23.04	23.12	1.11	1.19	1.17
	Left Cheek	1g SAR	0.112			0.12		
		10g SAR	0.073			0.08		
		Deviation	0.07			0.07		
	Left Tilt	1g SAR	0.039			0.04		
		10g SAR	0.024			0.03		
		Deviation	0.18			0.18		
	Right Cheek	1g SAR	0.062			0.07		
		10g SAR	0.044			0.05		
		Deviation	0.04			0.04		
	Right Tilt	1g SAR	0.053			0.06		
		10g SAR	0.031			0.03		
Deviation		0.15			0.15			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			20300	20175	20050	20300	20175	20050
20MHz QPSK100%RB	Tune-up		23.80	23.80	23.80	Scaling factor*		
	Measured Power [dBm]		23.26	23.06	23.19	1.13	1.18	1.15
	Left Cheek	1g SAR						
		10g SAR						
Deviation								
20MHz QPSK1RB B1	Left Cheek	1g SAR			0.12			0.12
		10g SAR			0.075			0.08
		Deviation			0.11			0.11
SIM 2	Left Cheek	1g SAR			0.121			0.12
		10g SAR			0.081			0.08
		Deviation			-0.06			-0.06

Table 14-14 LTE1700-FDD4 Body

LTE1700-FDD4 Body								
Ambient Temperature: 22.5						Liquid Temperature: 23.3		
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			20300	20175	20050	20300	20175	20050
			H	H	M	H	H	M
20MHz QPSK1RB	Tune-up		24.80	24.80	24.80	Scaling factor*		
	Measured Power [dBm]		24.48	24.11	24.72	1.08	1.17	1.02
	Front	1g SAR			0.138			0.14
		10g SAR			0.0853			0.09
		Deviation			0.09			0.09
	Rear	1g SAR			0.118			0.12
		10g SAR			0.0793			0.08
		Deviation			0.12			0.12
	Bottom edge	1g SAR			0.143			0.15
		10g SAR			0.081			0.08
		Deviation			0.07			0.07
	Left edge	1g SAR			0.179			0.18
		10g SAR			0.109			0.11
		Deviation			0			0.00
Right edge	1g SAR			0.0912			0.09	
	10g SAR			0.0377			0.04	
	Deviation			0.04			0.04	
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			20300	20175	20050	20300	20175	20050
			M	H	L			
20MHz QPSK50%RB	Tune-up		23.80	23.80	23.80	Scaling factor*		
	Measured Power [dBm]		23.35	23.04	23.12	1.11	1.19	1.17
	Front	1g SAR	0.106			0.12		
		10g SAR	0.0628			0.07		
		Deviation	0.02			0.02		
	Rear	1g SAR	0.0973			0.11		
		10g SAR	0.0617			0.07		
		Deviation	-0.11			-0.11		
	Bottom edge	1g SAR	0.102			0.11		
		10g SAR	0.0631			0.07		
		Deviation	-0.04			-0.04		
	Left edge	1g SAR	0.109			0.12		
		10g SAR	0.0638			0.07		
		Deviation	-0.02			-0.02		
Right edge	1g SAR	0.0524			0.06			
	10g SAR	0.0213			0.02			
	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		23.80	23.80	23.80	Scaling factor*		
	Measured Power [dBm]		23.26	23.06	23.19	1.13	1.18	1.15
20MHz QPSK1RB B1	Left edge	1g SAR			0.149			0.15
		10g SAR			0.0966			0.10
		Deviation			0.04			0.04
SIM 2	Left edge	1g SAR			0.149			0.15
		10g SAR			0.0879			0.09
		Deviation			0.14			0.14

Table 14-15 LTE2500-FDD7 Head

LTE2500-FDD7 Head								
Ambient Temperature: 22.5			Liquid Temperature: 23.3					
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		24.50	24.50	24.50	Scaling factor*		
	Measured Power [dBm]		23.93	23.55	23.78	1.14	1.25	1.18
	Left Cheek	1g SAR	0.368			0.42		
		10g SAR	0.206			0.23		
		Deviation	0.06			0.06		
	Left Tilt	1g SAR	0.09			0.10		
		10g SAR	0.043			0.05		
		Deviation	0.04			0.04		
	Right Cheek	1g SAR	0.203			0.23		
		10g SAR	0.117			0.13		
		Deviation	-0.09			-0.09		
	Right Tilt	1g SAR	0.162			0.18		
		10g SAR	0.066			0.08		
Deviation		0.01			0.01			
TRUE	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			21350 M	21100 H	20850 L	21350 M	21100 H	20850 L
20MHz QPSK50%RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.66	22.64	22.59	1.21	1.22	1.23
	Left Cheek	1g SAR	0.283			0.34		
		10g SAR	0.152			0.18		
		Deviation	0.17			0.17		
	Left Tilt	1g SAR	0.073			0.09		
		10g SAR	0.034			0.04		
		Deviation	0.04			0.04		
	Right Cheek	1g SAR	0.154			0.19		
		10g SAR	0.089			0.11		
		Deviation	0.09			0.09		
	Right Tilt	1g SAR	0.13			0.16		
		10g SAR	0.053			0.06		
Deviation		0.01			0.01			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			21350	21100	20850	21350	21100	20850
20MHz QPSK100%RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.60	22.62	22.54	1.23	1.22	1.25
	Left Cheek	1g SAR						
		10g SAR						
Deviation								
20MHz QPSK1RB B1	Left Cheek	1g SAR	0.334			0.38		
		10g SAR	0.171			0.19		
		Deviation	-0.05			-0.05		
SIM 2	Left Cheek	1g SAR	0.364			0.41		
		10g SAR	0.193			0.22		
		Deviation	0.1			0.10		



Table 14-16 LTE2500-FDD7 Body

LTE2500-FDD7 Body								
Ambient Temperature: 22.5			Liquid Temperature: 23.3					
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		24.50	24.50	24.50	Scaling factor*		
	Measured Power [dBm]		23.93	23.55	23.78	1.14	1.25	1.18
	Front	1g SAR	0.335			0.38		
		10g SAR	0.181			0.21		
		Deviation	-0.1			-0.10		
	Rear	1g SAR	0.382			0.44		
		10g SAR	0.215			0.25		
		Deviation	-0.04			-0.04		
	Bottom edge	1g SAR	0.324			0.37		
		10g SAR	0.144			0.16		
		Deviation	0.09			0.09		
	Left edge	1g SAR	0.461			0.53		
		10g SAR	0.247			0.28		
		Deviation	0.05			0.05		
Right edge	1g SAR	0.0561			0.06			
	10g SAR	0.0327			0.04			
	Deviation	0.07			0.07			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			21350	21100	20850	21350	21100	20850
			M	H	L			
20MHz QPSK50%RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.66	22.64	22.59	1.21	1.22	1.23
	Front	1g SAR	0.292			0.35		
		10g SAR	0.167			0.20		
		Deviation	0.14			0.14		
	Rear	1g SAR	0.304			0.37		
		10g SAR	0.179			0.22		
		Deviation	0.02			0.02		
	Bottom edge	1g SAR	0.243			0.30		
		10g SAR	0.108			0.13		
		Deviation	-0.09			-0.09		
	Left edge	1g SAR	0.326			0.40		
		10g SAR	0.173			0.21		
		Deviation	-0.1			-0.10		
Right edge	1g SAR	0.0506			0.06			
	10g SAR	0.0266			0.03			
	Deviation	0.19			0.19			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			21350	21100	20850	21350	21100	20850
20MHz QPSK100%RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.60	22.62	22.54	1.23	1.22	1.25
20MHz QPSK1RB B1	Left edge	1g SAR	0.418			0.48		
		10g SAR	0.224			0.26		
		Deviation	0.1			0.10		
SIM 2	Left edge	1g SAR	0.405			0.46		
		10g SAR	0.219			0.25		
		Deviation	0.16			0.16		

Table14-17 LTE700-FDD12 Head

LTE700-FDD12 Head								
Ambient Temperature: 22.5			Liquid Temperature: 23.3					
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		25.00	25.00	25.00	Scaling factor*		
	Measured Power [dBm]		23.95	23.93	23.86	1.27	1.28	1.30
	Left Cheek	1g SAR	0.1			0.13		
		10g SAR	0.088			0.11		
		Deviation	0.03			0.03		
	Left Tilt	1g SAR	0.057			0.07		
		10g SAR	0.025			0.03		
		Deviation	0.01			0.01		
	Right Cheek	1g SAR	0.124			0.16		
		10g SAR	0.098			0.12		
		Deviation	0.02			0.02		
	Right Tilt	1g SAR	0.07			0.09		
10g SAR		0.06			0.08			
Deviation		0.03			0.03			
TRUE	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			23130 L	23095 M	23060 M	23130 L	23095 M	23060 M
10MHz QPSK50%RB	Tune-up		24.00	24.00	24.00	Scaling factor*		
	Measured Power [dBm]		22.92	22.87	22.84	1.28	1.30	1.31
	Left Cheek	1g SAR	0.078			0.10		
		10g SAR	0.066			0.08		
		Deviation	0.08			0.08		
	Left Tilt	1g SAR	0.04			0.05		
		10g SAR	0.02			0.03		
		Deviation	0.03			0.03		
	Right Cheek	1g SAR	0.094			0.12		
		10g SAR	0.075			0.10		
		Deviation	-0.09			-0.09		
	Right Tilt	1g SAR	0.054			0.07		
10g SAR		0.045			0.06			
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		24.00	24.00	24.00	Scaling factor*		
	Measured Power [dBm]		22.91	22.85	22.69	1.28	1.30	1.35
	Left Cheek	1g SAR						
		10g SAR						
Deviation								
10MHz QPSK1RB B1	Right Cheek	1g SAR	0.096			0.12		
		10g SAR	0.076			0.10		
		Deviation	0.08			0.08		
SIM 1	Right Cheek	1g SAR	0.098			0.12		
		10g SAR	0.085			0.11		
		Deviation	0.19			0.19		

Table 14-18 LTE700-FDD12 Body

LTE700-FDD12 Body								
Ambient Temperature:		22.5			Liquid Temperature:			23.3
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		25.00	25.00	25.00	Scaling factor*		
	Measured Power [dBm]		23.95	23.93	23.86	1.27	1.28	1.30
	Front	1g SAR	0.133			0.17		
		10g SAR	0.106			0.14		
		Deviation	0.12			0.12		
	Rear	1g SAR	0.108			0.14		
		10g SAR	0.0852			0.11		
		Deviation	0.04			0.04		
	Bottom edge	1g SAR	0.0426			0.05		
		10g SAR	0.0237			0.03		
		Deviation	0.06			0.06		
	Left edge	1g SAR	0.124			0.16		
		10g SAR	0.0867			0.11		
		Deviation	0.16			0.16		
Right edge	1g SAR	0.182			0.23			
	10g SAR	0.129			0.16			
	Deviation	-0.08			-0.08			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			23130	23095	23060	23130	23095	23060
			L	M	M			
10MHz QPSK50%RB	Tune-up		24.00	24.00	24.00	Scaling factor*		
	Measured Power [dBm]		22.92	22.87	22.84	1.28	1.30	1.31
	Front	1g SAR	0.0982			0.13		
		10g SAR	0.0778			0.10		
		Deviation	-0.05			-0.05		
	Rear	1g SAR	0.0783			0.10		
		10g SAR	0.0615			0.08		
		Deviation	0.08			0.08		
	Bottom edge	1g SAR	0.0309			0.04		
		10g SAR	0.017			0.02		
		Deviation	0.06			0.06		
	Left edge	1g SAR	0.09			0.12		
		10g SAR	0.063			0.08		
		Deviation	0.03			0.03		
Right edge	1g SAR	0.135			0.17			
	10g SAR	0.0949			0.12			
	Deviation	-0.04			-0.04			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			23130	23095	23060	23130	23095	23060
10MHz QPSK100%RB	Tune-up		24.00	24.00	24.00	Scaling factor*		
	Measured Power [dBm]		22.91	22.85	22.69	1.28	1.30	1.35
	Front	1g SAR						
10g SAR								
Deviation								
10MHz QPSK1RB B1	Right edge	1g SAR	0.177			0.23		
		10g SAR	0.121			0.15		
		Deviation	0.03			0.03		
SIM 2	Right edge	1g SAR	0.168			0.21		
		10g SAR	0.117			0.15		
		Deviation	-0.12			-0.12		



Table 14-19 LTE2600-FDD38 Head

LTE2600-TDD38 Head								
Ambient Temperature: 22.5			Liquid Temperature: 23.3					
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			38150 M	38000 H	37850 H	38150 M	38000 H	37850 H
20MHz QPSK1RB	Tune-up		24.50	24.50	24.50	Scaling factor*		
	Measured Power [dBm]		23.74	23.50	23.52	1.19	1.26	1.25
	Left Cheek	1g SAR	0.2			0.24		
		10g SAR	0.101			0.12		
		Deviation	0.02			0.02		
	Left Tilt	1g SAR	0.051			0.06		
		10g SAR	0.026			0.03		
		Deviation	0.12			0.12		
	Right Cheek	1g SAR	0.081			0.10		
		10g SAR	0.046			0.05		
		Deviation	0.09			0.09		
	Right Tilt	1g SAR	0.055			0.07		
		10g SAR	0.028			0.03		
Deviation		-0.14			-0.14			
TRUE	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			38150 L	38000 H	37850 L	38150 L	38000 H	37850 L
20MHz QPSK50%RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.51	22.49	22.53	1.26	1.26	1.25
	Left Cheek	1g SAR			0.144			0.18
		10g SAR			0.077			0.10
		Deviation			0.08			0.08
	Left Tilt	1g SAR			0.09			0.11
		10g SAR			0.042			0.05
		Deviation			0.06			0.06
	Right Cheek	1g SAR			0.065			0.08
		10g SAR			0.037			0.05
		Deviation			-0.05			-0.05
	Right Tilt	1g SAR			0.07			0.09
		10g SAR			0.033			0.04
Deviation				0.03			0.03	
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			38150	38000	37850	38150	38000	37850
20MHz QPSK100%RB	Tune-up		23.50	23.50	23.50	Scaling factor*		
	Measured Power [dBm]		22.41	22.44	22.43	1.29	1.28	1.28
	Left Cheek	1g SAR						
		10g SAR						
Deviation								
20MHz QPSK1RB B1	Left Cheek	1g SAR	0.164			0.20		
		10g SAR	0.084			0.10		
		Deviation	0.08			0.08		
SIM2	Left Cheek	1g SAR	0.151			0.18		
		10g SAR	0.082			0.10		
		Deviation	0.01			0.01		