

14 SAR Test Result

It is determined by user manual for the distance between the EUT and the phantom bottom. The distance is 10/15mm 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:

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

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

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

Mode	Duty Cycle
Speech for GSM850/1900	1:8.3
GPRS&EGPRS for GSM850/1900(AP ON)	1:2
GPRS&EGPRS for 1900(AP OFF)	1:4
WCDMA<E	1:1

14.1 SAR results

Table 14-1 GSM850 #1 Head

			GS	M850 #1 Hea	d			
Ambient T	emperature:		22.	5		Liquid Ter	22.3	
	Device	SAR		ured SAR [orted SAR [\	
Mode	orientation	measurement	CH251	CH190	CH128	CH251	CH190	CH128
							836.6 MHz	
		ne-up	33.00	33.00	33.00		Scaling factor	
	Slot Average	e Power [dBm]	32.65	32.77	32.74	1.08	1.05	1.06
	Left Cheek	1g SAR		0.044			0.05	
		10g SAR		0.035			0.04	
		Deviation		0.08			80.0	
	Left Tilt	1g SAR		0.032			0.03	
GSM		10g SAR		0.024			0.03	
GSWI		Deviation		0.01			0.01	
		1g SAR	0.058	0.063	0.074	0.06	0.07	0.08
	Right Cheek	10g SAR	0.047	0.051	0.059	0.05	0.05	0.06
		Deviation	0.08	-0.06	0.07	0.08	-0.06	0.07
	Right Tilt	1g SAR		0.036			0.04	
		10g SAR		0.03			0.03	
		Deviation		0.01			0.01	



Table 14-2 GSM850 #1 Body

Mode	CH128
Mode Device orientation SRIC CH251 B48.8 MHz CH190 B48.8 MHz CH251 B48.8 MHz CH190 B48.8 MHz S48.8 MHz B48.8 MHz A48.8 MHz B48.8 MHz	CH128
Mode orientation measurement CH251 848.8 MHz 836.6 MHz 824.2 MHz M	
Salar Sala	024 2 MILI-
Slot Average Power [dBm] 29.33 29.49 29.45 1.17 1.13	
Text	
Front 10g SAR 0.08 0.09 Deviation 0.03 0.03 1g SAR 0.334 0.183 0.275 0.39 0.21 Rear 10g SAR 0.183 0.169 0.154 0.21 0.19	1.14
Deviation 0.03 0.03 1g SAR 0.334 0.183 0.275 0.39 0.21 Rear 10g SAR 0.183 0.169 0.154 0.21 0.19	
1g SAR 0.334 0.183 0.275 0.39 0.21 Rear 10g SAR 0.183 0.169 0.154 0.21 0.19	
Rear 10g SAR 0.183 0.169 0.154 0.21 0.19	
	0.31
Deviation 0.06 0.18 0.02 0.06 0.18	0.17
	0.02
1g SAR 0.083 0.09	
GPRS 4 Left edge 10g SAR 0.057 0.06	
Txslots Deviation -0.08 -0.08	
1g SAR 0.205 0.23	
Right edge 10g SAR 0.223 0.25	
Deviation 0.17 0.17	
1g SAR 0.128 0.14	
Bottom edge 10g SAR 0.072 0.08	
Deviation 0.11 0.11	
1g SAR	
Top edge 10g SAR	
Deviation	
Tune-up 30.00 30.00 30.00 Scaling factor*	-
EGPRS Slot Average Power [dBm] 29.34 29.48 29.44 1.16 1.13	1.14
GMSK 4 Worst case 1g SAR 0.316 0.37	************************
Tyslots 10g SAR 0.175 0.20	
check Deviation 0.01 0.01	

Table 14-3 PCS1900 #1 Head

			PC	S1900 #1 Hea	d			
Ambient T	emperature:		22	.5		Liquid Te	22.3	
Mode	Device orientation	SAR measurement	Measured SAR [W/kg] CH810 CH661 CH51			Rep CH810 1909.8	orted SAR [V CH661 1880 MHz	V/kg] CH512 1850.2
	Tur	ne-up	1909.8 30.50	1880 MHz 30.50	1850.2 30.50		Scaling factor	
	Slot Average	e Power [dBm]	29.72	29.90	30.44	1.20	1.15	1.01
		1g SAR			0.072			0.07
	Left Cheek	10g SAR			0.046			0.05
		Deviation			0.09			0.09
	Left Tilt	1g SAR			0.056			0.06
GSM		10g SAR			0.036			0.04
GSIVI		Deviation			0.04			0.04
		1g SAR	0.072	0.064	0.082	0.09	0.07	0.08
	Right Cheek	10g SAR	0.044	0.04	0.052	0.05	0.05	0.05
		Deviation	0.07	0.11	0.18	0.07	0.11	0.18
		1g SAR			0.058			0.06
	Right Tilt	10g SAR			0.041			0.04
		Deviation			0.05			0.05



Table 14-4 PCS1900 #1 Body AP OFF

			PC	S1900 #1 Body	у			
Ambient T	emperature:	22.5				Liquid Te	mperature:	22.3
	Device		Mea	Measured SAR [W/kg]			orted SAR [W	/kg]
Mode			CH810	CH661	CH512	CH810	CH661	CH512
			1909.8	1880 MHz	1850.2	1909.8	1880 MHz	1850.2
		ne-up	30.00	30.00	30.00		Scaling factor*	
	Slot Average	e Power [dBm]	28.95	29.12	29.64	1.27	1.22	1.09
		1g SAR			0.274			0.30
	Front	10g SAR			0.159			0.17
		Deviation			0.05			0.05
		1g SAR	0.281	0.311	0.381	0.36	0.38	0.41
	Rear	10g SAR	0.172	0.189	0.229	0.22	0.23	0.25
		Deviation	0.1	-0.08	-0.05	0.10	-0.08	-0.05
	Left edge	1g SAR						
GPRS 2		10g SAR						
Txslots		Deviation						
		1g SAR						
	Right edge	10g SAR						
		Deviation						
		1g SAR						
	Bottom edge	10g SAR						
		Deviation						
		1g SAR						
	Top edge	10g SAR]				
		Deviation						



Table 14-5 PCS1900 #2 Body AP ON

			PC	S1900 #2 Bod	y			
Ambient T	emperature:	22.5				Liquid Ter	mperature:	22.3
	Device	SAR	Mea	sured SAR [V	V/kg]	Rep	orted SAR [W	//kg]
Mode		measurement	CH810	CH661	CH512	CH810	CH661	CH512
			1909.8	1880 MHz	1850.2	1909.8	1880 MHz	1850.2
	Tune-up		25.00	25.00	25.00		Scaling factor	
	Slot Average	e Power [dBm]	24.33	24.30	24.64	1.17	1.18	1.09
		1g SAR		0.507			0.60	
	Front	10g SAR		0.283			0.33	
		Deviation		0.09			0.09	
		1g SAR		0.654			0.77	
	Rear	10g SAR		0.389			0.46	
		Deviation		0.13			0.13	
		1g SAR		0.111			0.13	
GPRS 4	Left edge	10g SAR		0.065			0.08	
Txslots		Deviation		0.08			0.08	
	Right edge	1g SAR		0.089			0.10	
		10g SAR		0.051			0.06	
		Deviation		-0.16			-0.16	
		1g SAR	0.901	0.979	1.09	1.05	1.15	1.18
	Bottom edge	10g SAR	0.494	0.54	0.611	0.58	0.63	0.66
		Deviation	-0.04	-0.03	-0.12	-0.04	-0.03	-0.12
		1g SAR						
	Top edge	10g SAR						
		Deviation						
	Tur	ne-up	25.00	25.00	25.00		Scaling factor	k
EGPRS	Slot Average	e Power [dBm]	24.33	24.29	24.64	1.17	1.18	1.09
GMSK 4		1g SAR			0.975			1.06
Txslots	Bottom edge	10g SAR			0.546			0.59
		Deviation			0.04			0.04
GPRS 4		1g SAR			1.91			2.07
Txslots	Bottom edge	10g SAR			0.85			0.92
0mm		Deviation			-0.1			-0.10
GPRS 4		1g SAR			0.888			0.96
Txslots	Front	10g SAR			0.394			0.43
0mm		Deviation			0.05			0.05
GPRS 4		1g SAR			1.15			1.25
Txslots	Rear	10g SAR			0.541			0.59
0mm		Deviation			-0.02			-0.02



Table 14-6 WCDMA1900-BII #1Head

			WCD	MA1900-BII #1I	Head			
Ambient Te	emperature:	22.5				Liquid Ter	22.3	
	Device	SAR		sured SAR [V			orted SAR [V	
Mode	orientation	measurement	CH9538	CH9400	CH9262	CH9538	CH9400	CH9262
			1907.6 MHz		1852.4 MHz			1852.4 MHz
	Tun	e-up	24.00	24.00	24.00		Scaling factor	*
	Slot Average	Power [dBm]	23.98	23.88	23.95	1.00	1.03	1.01
		1g SAR	0.169	0.191	0.178	0.17	0.20	0.18
	Left Cheek	10g SAR	0.114	0.121	0.12	0.11	0.12	0.12
		Deviation	0.09	0.11	0.14	0.09	0.11	0.14
	Left Tilt	1g SAR		0.072			0.07	
RMC		10g SAR		0.049			0.05	
RWC		Deviation		-0.02			-0.02	
		1g SAR		0.137			0.14	
	Right Cheek	10g SAR		0.091			0.09	
		Deviation		0.11			0.11	
	Right Tilt	1g SAR		0.077			80.0	
		10g SAR		0.054			0.06	
		Deviation		0.06			0.06	

Table 14-7 WCDMA1900-BII #1Body AP OFF

			WCD	MA1900-BII #1	Body			
Ambient 7	Temperature:	22.5					nperature:	22.3
	Device	SAR	Meas	Measured SAR [W/kg]			orted SAR [V	V/kg]
Mode			CH9538	CH9400	CH9262	CH9538	CH9400	CH9262
			1907.6 MHz	1880 MHz		1907.6 MHz		1852.4 MHz
		ne-up	24.00	24.00	24.00		Scaling factor	
	Slot Average	Power [dBm]	23.98	23.88	23.95	1.00	1.03	1.01
		1g SAR		0.329			0.34	
	Front	10g SAR		0.196			0.20	
		Deviation		0.11			0.11	
	Rear	1g SAR	0.396	0.401	0.518	0.40	0.41	0.52
		10g SAR	0.23	0.232	0.313	0.23	0.24	0.32
		Deviation	0.09	-0.04	-0.05	0.09	-0.04	-0.05
	Left edge	1g SAR						
RMC		10g SAR						
A STATE OF THE STA		Deviation						
		1g SAR						
	Right edge	10g SAR						
		Deviation						
		1g SAR						
	Bottom edge	10g SAR						
		Deviation						
		1g SAR						
	Top edge	10g SAR						
	1-77-1-2-1-1-7-2-2-1	Deviation						



Table 14-8 WCDMA1900-BII #2Body AP ON

			WCDMA ²	1900-BII#2 AP	ONBody			
Ambient To	emperature:	22.5				Liquid Ten	nperature:	22.3
	Device	SAR	Measured SAR [W/kg]			Reported SAR [W/kg]		
Mode		measurement	CH9538	CH9400	CH9262	CH9538	CH9400	CH9262
			1907.6 MHz			1907.6 MHz		1852.4 MHz
		e-up	21.00	21.00	21.00		Scaling factor	
	Slot Average	Power [dBm]	20.44	20.27	20.45	1.14	1.18	1.14
		1g SAR		0.319			0.38	
	Front	10g SAR		0.189			0.22	
		Deviation		0.09			0.09	
		1g SAR		0.454			0.54	
	Rear	10g SAR		0.265			0.31	
		Deviation		0.03			0.03	
	Left edge	1g SAR		0.057			0.07	
RMC		10g SAR		0.035			0.04	
		Deviation		0.12			0.12	
		1g SAR		0.053			0.06	
	Right edge	10g SAR		0.033			0.04	
		Deviation		-0.08			-0.08	
		1g SAR	0.612	0.701	0.593	0.70	0.83	0.67
	Bottom edge	10g SAR	0.341	0.382	0.329	0.39	0.45	0.37
		Deviation	0.01	-0.03	0.01	0.01	-0.03	0.01
		1g SAR						
	Top edge	10g SAR						
		Deviation						
RMC		1g SAR		2.75			3.25	
0mm	Bottom edge	10g SAR		1.18			1.40	
Ollilli		Deviation		-0.1			-0.10	

Table 14-9 WCDMA1700-BIV #1Head

		Tubic	1401100		¥ π IIICaa			
			WCDI	MA1700-BIV #1	Head			
Ambient 1	Ambient Temperature: 22.5					Liquid Ter	mperature:	22.3
	Device	SAR		sured SAR [V			orted SAR [W	
Mode	orientation	measurement	CH1513	CH1412	CH1312	CH1513	CH1412	CH1312
	Offeritation	measurement	1752.6 MHz	1732.4 MHz	1712.4 MHz	1752.6 MHz	1732.4 MHz	1712.4 MHz
	Tur	ne-up	24.20	24.20	24.20	:	Scaling factor	•
	Slot Average	Power [dBm]	24.04	24.05	24.08	1.04	1.04	1.03
		1g SAR		0.052			0.05	
	Left Cheek	10g SAR		0.041			0.04	
		Deviation		0.11			0.11	
	Left Tilt	1g SAR		0.033			0.03	
RMC		10g SAR		0.021			0.02	
KWC		Deviation		-0.08			-0.08	
		1g SAR	0.124	0.149	0.089	0.13	0.15	0.09
	Right Cheek	10g SAR	0.086	0.096	0.062	0.09	0.10	0.06
		Deviation	0.04	0.16	0.07	0.04	0.16	0.07
		1g SAR		0.042			0.04	
	Right Tilt	10g SAR		0.028			0.03	
		Deviation		-0.11			-0.11	



Table 14-10 WCDMA1700-BIV #1Body AP OFF

			WCDI	MA1700-BIV #1	Body			
Ambient 7	Temperature:	22.5				Liquid Ter	22.3	
	Device	SAR	Mea	sured SAR [V	V/kg]	Rep	orted SAR [W	//kg]
Mode	orientation	measurement	CH1513	CH1412	CH1312	CH1513	CH1412	CH1312
						1752.6 MHz	1732.4 MHz	1712.4 MHz
		ne-up	24.20	24.20	24.20		Scaling factor	
	Slot Average	Power [dBm]	24.04	24.05	24.08	1.04	1.04	1.03
		1g SAR		0.487			0.50	
	Front	10g SAR		0.275			0.28	
		Deviation		0.11			0.11	
	Rear	1g SAR	1.06	0.801	1.02	1.10	0.83	1.05
		10g SAR	0.634	0.473	0.605	0.66	0.49	0.62
		Deviation	0.07	0.08	0.02	0.07	0.08	0.02
	Left edge	1g SAR						
RMC		10g SAR						
		Deviation						
		1g SAR						
	Right edge	10g SAR						
	Commence	Deviation						
		1g SAR						
	Bottom edge	10g SAR						
		Deviation						
		1g SAR						
	Top edge	10g SAR						
	1-000-0000 10000	Deviation						

Table 14-11 WCDMA1700-BIV #2Body AP ON

				1700-BIV #2 AP					
Ambient 7	Temperature:	22.5				Liquid Ter	mperature:	22.3	
	Device	SAR	Measured SAR [W/kg]			Reported SAR [W/kg]			
Mode	orientation	measurement	CH1513	CH1412	CH1312	CH1513	CH1412	CH1312	
			1/52.6 MHZ	1732.4 MHz					
		ie-up	21.20	21.20	21.20		Scaling factor		
	Slot Average	Power [dBm]	20.02	20.01	20.04	1.31	1.32	1.31	
		1g SAR		0.346			0.46		
	Front	10g SAR		0.199			0.26		
		Deviation		0.08			0.08		
		1g SAR	0.657	0.73	0.694	0.86	0.96	0.91	
	Rear	10g SAR	0.254	0.396	0.376	0.33	0.52	0.49	
		Deviation	0.11	0.04	0.06	0.11	0.04	0.06	
	Left edge	1g SAR		0.086			0.11		
RMC		10g SAR		0.054			0.07		
		Deviation		0.06			0.06		
	Right edge	1g SAR		0.046			0.06		
		10g SAR		0.031			0.04		
		Deviation		0.09			0.09		
		1g SAR	0.852	0.812	0.763	1.12	1.07	1.00	
	Bottom edge	10g SAR	0.471	0.448	0.42	0.62	0.59	0.55	
		Deviation	-0.06	0.01	0.18	-0.06	0.01	0.18	
		1g SAR							
	Top edge	10g SAR							
		Deviation							
D140		1g SAR	2.75			3.61			
RMC 0mm	Bottom edge	10g SAR	1.24			1.63			
umm		Deviation	-0.03			-0.03			
DMC		1g SAR	2.12			2.78			
RMC 0mm	Rear	10g SAR	0.669			0.88			
umm		Deviation	0.06			0.06			



Table 14-12 WCDMA850-BV #1Head

			WCD	MA850-BV #1F	lead			
Ambient T	emperature:	22.5				Liquid Temperature:		22.3
Mode	Device orientation	SAR measurement	Mea CH4233 846.6 MHz	sured SAR [V CH4182 835.4 MHz	CH4132	CH4233	orted SAR [V CH4182 835.4 MHz	CH4132
	Tune-up		24.00	24.00	24.00	Scaling factor*		
	Slot Average Power [dBm]		23.91	23.89	23.85	1.02	1.03	1.04
	Left Cheek	1g SAR		0.083			0.09	
		10g SAR		0.067			0.07	
		Deviation		0.09			0.09	
	Left Tilt	1g SAR		0.056			0.06	
RMC		10g SAR		0.045			0.05	
RWC		Deviation		0.12			0.12	
	Right Cheek	1g SAR	0.095	0.11	0.119	0.10	0.11	0.12
		10g SAR	0.075	0.087	0.094	0.08	0.09	0.10
		Deviation	0.01	0.08	0.03	0.01	0.08	0.03
	Right Tilt	1g SAR		0.064			0.07	
		10g SAR		0.054			0.06	
		Deviation		0.08			0.08	

Table 14-13 WCDMA850-BV #1Body

			WCE)MA850-BV #16	Body				
Ambient	Ambient Temperature: 22.5						Liquid Temperature:		
	Device	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]			
Mode			CH4233	CH4182	CH4132	CH4233	CH4182	CH4132	
			846.6 MHz	835.4 MHz	826.4 MHz	846.6 MHz			
	Tune-up		24.00 24.00 24.00		Scaling factor*				
	Slot Average Power [dBm]		23.91	23.89	23.85	1.02	1.03	1.04	
		1g SAR		0.122			0.13		
	Front	10g SAR		0.072			0.07		
		Deviation		0.06			0.06		
	Rear	1g SAR	0.254	0.258	0.242	0.26	0.26	0.25	
		10g SAR	0.139	0.141	0.136	0.14	0.14	0.14	
		Deviation	0.01	-0.02	0.08	0.01	-0.02	0.08	
	Left edge	1g SAR		0.068			0.07		
RMC		10g SAR		0.046			0.05		
TAMO		Deviation		0.11			0.11		
	Right edge	1g SAR		0.104			0.11		
		10g SAR		0.071			0.07		
		Deviation		0.01			0.01		
	Bottom edge	1g SAR		0.115			0.12		
		10g SAR		0.064			0.07		
		Deviation		0.09			0.09		
	Top edge	1g SAR							
		10g SAR							
		Deviation							



Table 14-14 LTE1900-FDD2 #1 Head

			LTE1	900-FDD2 #1	Head				
Ambient Te	emperature:	Liquid Temperature: 22.							
	<u> </u>	SAR	SAR Measured SAR [W/kg]			Reported SAR [W/kg]			
Mode	Device orientation	measureme	19100	18900	18700	19100	18900	18700	
	onentation	nt	М	М	М	M	М	М	
	Tune-up		24.00 24.00 24.00			Scaling factor*			
	Measured F	Power [dBm]	23.19	23.20	23.24	1.20	1.20	1.19	
	l	1g SAR			0.114			0.14	
	Left Cheek	10g SAR			0.074			0.09	
		Deviation			0.11			0.11	
	19 100000000	1g SAR			0.073			0.09	
20MHz	Left Tilt	10g SAR			0.05			0.06	
QPSK1RB		Deviation			0.09			0.09	
	Right Cheek	1g SAR			0.159			0.19	
		10g SAR			0.1			0.12	
		Deviation			0.03			0.03	
	Right Tilt	1g SAR			0.048			0.06	
		10g SAR			0.034			0.04	
		Deviation			0.02			0.02	
		SAR	Meas	sured SAR [N/kg]	Reported SAR [W/kg]			
TRUE	Device orientation	measureme	19100	18900	18700	19100	18900	18700	
		nt	L	М	L	L	М	L	
	Tune-up		23.00	23.00	23.00		Scaling factor	•	
	Measured F	Power [dBm]	22.16	22.09	22.19	1.21	1.23	1.20	
	Left Cheek	1g SAR			0.083			0.10	
		10g SAR			0.055			0.07	
		Deviation			0.14			0.14	
	Left Tilt	1g SAR			0.062			0.07	
20MHz QPSK50% RB		10g SAR			0.042			0.05	
		Deviation			-0.05			-0.05	
	Right Cheek	1g SAR			0.136			0.16	
					0.087			0.10	
		Deviation			0.04			0.04	
	Right Tilt	1g SAR			0.038			0.05	
								0.00	
	Right Lift	10g SAR			0.027			0.03	



Table 14-15 LTE1900-FDD2 #1 Body AP OFF

		Tuble 1		1900-FDD2 #1	Body	\\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
Ambient Te	emperature:	22.5			,	Liquid Ter	mperature:	22.3	
Mode	l i	SAR	Meas	sured SAR [W/kgl	Reported SAR [W/kg]			
	Device	measureme	19100	18900	18700	19100	18900	18700	
	orientation	nt	М	М	М	М	М	М	
	Tun	e-up	24.00	24.00	24.00		Scaling factor*		
	Measured F	Power [dBm]	23.19	23.20	23.24	1.20	1.20	1.19	
		1g SAR			0.336			0.40	
	Front	10g SAR			0.195			0.23	
		Deviation			0.03			0.03	
		1g SAR			0.474			0.56	
	Rear	10g SAR			0.287			0.34	
		Deviation			-0.1			-0.10	
		1g SAR							
20MHz	Left edge	10g SAR							
QPSK1RB		Deviation			·				
		1g SAR							
	Right edge	10g SAR							
	ragin eage	Deviation			{				
		1g SAR							
	Bottom edge	10g SAR			 				
		Deviation							
	Top edge	1g SAR							
		10g SAR							
		Deviation							
		SAR	Measured SAR [W/kg]			Ren	orted SAR [V	//kal	
Mode	Device orientation	measureme	19100	18900	18700	19100	18900	18700	
Wode		nt	13100	AND AND ADDRESS.	10700	13100	10300	10700	
	Tun		23.00	M 23.00	23.00		Scaling factor		
	Tune-up Measured Power [dBm]		22.16	22.09	22.19	1.21	1.23	1.20	
	Measured F		22.10	22.09		1.21	1.23	Market Victorian Inc.	
	Et	1g SAR 10g SAR			0.194 0.118			0.23 0.14	
	Front	Deviation			0.116			0.14	
					0.392			0.14	
	Rear	1g SAR 10g SAR			0.392			0.47	
		Deviation			0.02			0.02	
					0.02			0.02	
20MHz	Left edge	1g SAR							
QPSK50%		10g SAR Deviation					<u></u>		
RB		1g SAR							
	Right edge	10g SAR							
	Bottom edge	Deviation 1g SAR							
		1g SAR							
		10g SAR							
		Deviation							
		1 a C A D							
	Tanadas	1g SAR							
	Top edge	1g SAR 10g SAR Deviation							