

Appendix F. FCC 3G SAR Measurement Procedures

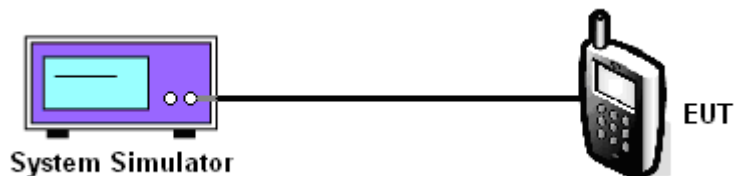
Conducted Output Power:

The EUT was tested according to the requirements of the FCC 3G procedures and the 3.1.2.3.4.

A detailed analysis of the output power verification is provided as the table below:

Function Type	Reverse Traffic Channel	Test Mode	Radio Configuration		Service Option	Data Rates (kbps)	Power Control	Low Ch	Mid. Ch	High Ch
			Forward Traffic Channel (Fwd)	Reverse Traffic Channel (Rvs)				1013	384	777
CDMA2000 Cellular	FCH	1	1	1	55	Full	All Up	23.95	23.34	23.84
		3	3	3	55	Full	All Up	23.97	23.36	23.88
	FCH+SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	24.06	23.40	23.93

CDMA2000 Setup Configuration:



Setup Configuration

1. The EUT was connected to System Simulator, Agilent 8960. Refer to the drawing of Setup Configuration.
2. The RF path losses were compensated into the measurements.
3. A call was established between EUT and System Simulator with following setting:
 - a. For 1xRTT, set the Radio Configuration and the Service Option
 - b. For 1xEV-DO, set the Protocol Release and Data Rate
 - c. Set the Power Control to All Up Bits
4. The transmitted maximum output power was recorded.

Call Setup Screen									
Call Control		Active Cell Operating Mode						Call Parms	
Mobile Station Information ESN (Hex): ESN (Dec): NCC: NMC: MSIN: Slot Class: Slot Cycle Index: ---- Protocol Revision:								Cell Power	
								-86.00	
								dBm/1.23 MHz	
								Cell Band	
								US PCS	
								Channel	
								1175	
								Protocol Rev	
								6 (IS-2000-0)	
								Radio Config	
						(Fud1, Rvs1)			
						S055 (Loopback)			
Close Menu		FCH Service Option Setup				Value		FCH Service Option Setup	
		Service Option S01 (Voice) S02 (Loopback) S03 (Voice) S06 (SMS) S055 (Loopback) S068 (Voice)				S055 (Loopback) S09 (Loopback) S055 (Loopback) S055 (Loopback) S055 (Loopback)			
		Active Cell				Sys Type: IS-2000			
		Idle							
		IntRef Offset						1 of 4	

1xRTT setting for Radio Configuration 1 with Service Option 55

Call Setup Screen									
Call Control		Active Cell Operating Mode						Call Parms	
Mobile Station Information ESN (Hex): ESN (Dec): NCC: NMC: NSIN: Slot Class: Slot Cycle Index: ----- Protocol Revision:								Cell Power	
								-86.00	
								dBm/1.23 MHz	
								Cell Band	
								US PCS	
								Channel	
								1175	
								Protocol Rev	
								6 (IS-2000-0)	
								Radio Config	
						(Fud3, Rvs3)			
						S055 (Loopback)			
Close Menu		FCH Service Option Setup				Value		FCH Service Option Setup	
		Service Option S01 (Voice) S02 (Loopback) S03 (Voice) S06 (SMS) S055 (Loopback) S032 (+ F-SCH)				S055 (Loopback) S09 (Loopback) S055 (Loopback) S055 (Loopback) S055 (Loopback)			
		Active Cell				Sys Type: IS-2000			
		Idle							
		IntRef Offset						1 of 4	

1xRTT setting for Radio Configuration 3 with Service Option 55

Call Setup Screen									
Call Control		Active Cell Operating Mode						Call Parms	
Mobile Station Information ESN (Hex): ESN (Dec): NCC: NMC: NSIN: Slot Class: Slot Cycle Index: ----- Protocol Revision: FCH Service Option Setup Service Option for Fud3 Bus Service Option for Fud3 Bus Service Option for Fud3 Bus Service Option for Fud3 Bus Service Option for Fud3 Bus Service Option for Fud3 Bus Service Option for Fud3 Bus Service Option for Fud3 Bus Service Option for Fud3 Bus Service Option for Fud3 Bus Service Option S02 (Loopback) S03 (Voice) S06 (SMS) S055 (Loopback) S032 (+ F-SCH) S032 (+ SCH) S055 (Loopback) S09 (Loopback) S032 (+ SCH) S055 (Loopback) S055 (Loopback)		Cell Power -86.00 dBm/1.23 MHz Cell Band US PCS Channel 1175 Protocol Rev 6 (IS-2000-0) Radio Config (Fud3, Rvs3) S032 (+ SCH) FCH Service Option Setup							
		Close Menu		Active Cell		Sys Type: IS-2000			
				Idle					
				IntRef		Offset			
								1 of 4	

1xRTT setting for Radio Configuration 3 with Service Option 32

Call Setup Screen									
Call Control		Active Cell Operating Mode					Call Params		
Operating Mode		Access Terminal Information (AT Reported) Session Seed: Hardware ID Type (Hex): Hardware ID (Hex): Hardware ID (Decimal):					Rvs Power Ctrl		
Active Cell							Rvs Power Ctrl	Active bits	
		Access Terminal Information (AN Assigned) UATI 024: ---- UATI Color Code: ---- NAC Index: ----					Pur Ctrl Step	1.0 dB	
Start Data Connection							Call Drop Timer	On	
		Protocol Release Session App: 0 (1xEV-DO) Application Test Applica: A (1xEV-DO-A) Limited TAP: B (1xEV-DO-B) AT Directed: Z DRC Value Fi: ACK Channel:					Call Limit Mode	Off	
Close Session							Protocol Rel	0 (1xEV-DO)	
Handoff Setup		Active Cell Idle					Sys Type: IS-856		
AT Max Power	23 dBm/1.23MHz								
1 of 3		IntRef	Offset	PLSub0	RTAP	2 of 3			

1xEV-DO setting for Protocol Release (Rev.0 or Rev.A)

Call Setup Screen									
Call Control		Active Cell Operating Mode					Call Params		
Operating Mode		Access Terminal Information (AT Reported) Session Seed: Hardware ID Type (Hex): Hardware ID (Hex): Hardware ID (Decimal):					Cell Power	-86.00	
Active Cell							Cell Power	dBm/1.23 MHz	
		Access Terminal Information (AN Assigned) UATI 024: ---- UATI Color Code: ---- NAC Index: ----					Cell Band	US PCS	
Start Data Connection							Channel	1175	
		RTAP Rate Session App: 9.6 kbps Application Test Applica: 19.2 kbps Limited TAP: 38.4 kbps AT Directed: 76.8 kbps DRC Value Fi: 153.6 kbps ACK Channel:					Application Config		
Close Session							FTAP Rate	307.2 kbps (2 Slot, QPSK)	
Handoff Setup		Active Cell Idle					Sys Type: IS-856		
AT Max Power	23 dBm/1.23MHz								
1 of 3		IntRef	Offset	PLSub0	RTAP	1 of 3			

1xEV-DO setting for RTAP data rate (9.6 or 38.4 or 153.6 kbps)



Call Setup Screen									
Call Control		Active Cell Operating Mode					Call Params		
Operating Mode	Active Cell	Access Terminal Information (AT Reported)					Cell Power		
		Session Seed:					-86.00		
		Hardware ID Type (Hex):					dBm/1.23 MHz		
		Hardware ID (Hex):					Cell Band		
		Hardware ID (Decimal):					US PCS		
		Access Terminal Information (AN Assigned)					Channel		
	Start Data Connection	UATI 024: ----					1175		
		UATI Color Code: ----							
		MAC Index: ----							
	Close Session	Application Configuration					Application Config		
		Session App: R-Data Packet Size					Application		
		Enhanced Te: 128					AP		
		AT Directed: 256					Z		
		DRC Value Fi: 512							
	Handoff Setup	ACK Channel: 768							
		ACK Channel: 768							
		Reverse Data: 1024					Capacity		
	AT Max Power	Expected En: 1536					kbps		
	23 dBm/1.23MHz						bits		
		Active Cell			Sys Type: IS-856				
		Idle							
1 of 3		IntRef	Offset		PLSub0	RETAP	1 of 3		

1xEV-DO setting for RETAP data rate (128 or 2048 or 12288 kbps)



Reference:

- [1] SAR Measurement Procedures for 3G Devices CDMA 2000/Ev-Do/WCDMA/HSDPA, June 2006
Laboratory Division Office of Engineering and Technology Federal Communications Commission
- [2] 3.1.2.3.4 Maximum RF Output Power 3GPP2 C.S0033-0 Version 2.0, Date: 12 December 2003
Recommended Minimum Performance Standards for cdma2000 High Rate Packet Data Access
Terminal