

Appendix F. FCC 3G SAR Measurement Procedures

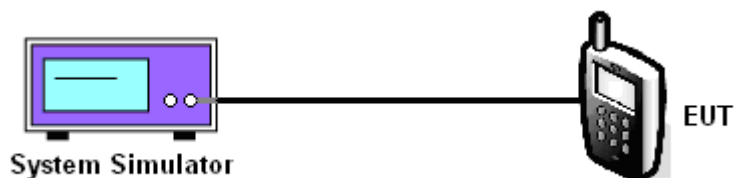
Conducted Output Power:

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	24.00	23.92	23.86
		3	3	3	55	Full	All Up	24.10	24.03	23.97
	FCH+SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	24.11	23.99	23.96
	FCH + F-SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	23.99	23.95	23.94

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	
<div> <div>Mobile Station Information</div> <div> <div>ESN (Hex):</div> <div>ESN (Dec):</div> <div>NCC:</div> <div>NMC:</div> <div>MSIN:</div> <div>Slot Class:</div> <div>Slot Cycle Index: -----</div> <div>Protocol Revision:</div> </div> </div>								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	
		<div> <div>Service Option</div> <div> <div>S01 (Voice)</div> <div>S02 (Loopback)</div> <div>S03 (Voice)</div> <div>S06 (SMS)</div> <div>S055 (Loopback)</div> <div>S068 (Voice)</div> </div> </div>				<div> <div>S055 (Loopback)</div> <div>S09 (Loopback)</div> <div>S055 (Loopback)</div> <div>S055 (Loopback)</div> <div>S055 (Loopback)</div> <div></div> <div></div> </div>			
		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 Params	
<div>Close Menu</div>		<div>Mobile Station Information</div> <div> ESN (Hex): ESN (Dec): MCC: MNC: MSIN: Slot Class: Slot Cycle Index: ---- Protocol Revision: </div>						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)									
FCH Service Option Setup									
S055 (Loopback)									
S032 (+ F-SCH)									
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 Params	
<div>Close Menu</div>		<div>Mobile Station Information</div> <div> ESN (Hex): ESN (Dec): MCC: MNC: MSIN: Slot Class: Slot Cycle Index: ---- Protocol Revision: </div>						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)									
S032 (+ SCH)									
FCH Service Option Setup									
S055 (Loopback)									
S032 (+ SCH)									
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)	
		Active Cell Idle					Sys Type: IS-856		
Handoff Setup									
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)	
		Active Cell Idle					Sys Type: IS-856		
Handoff Setup									
AT Max Power	23 dBm/1.23MHz						RTAP Rate		9.6 kbps
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) Session Seed: Hardware ID Type (Hex): Hardware ID (Hex): Hardware ID (Decimal):					Cell Power -86.00 dBm/1.23 MHz		
Start Data Connection		Access Terminal Information (AN Assigned) UATI 024: ---- UATI Color Code: ---- MAC Index: ----					Cell Band US PCS		
Close Session		Application Configuration Session App: R-Data Packet Size Enhanced Te: 128 AT Directed: 256 DRC Value Fi: 512 ACK Channel: 768 Reverse Data: 1024 Expected En: 1536					Channel 1175		
Handoff Setup		Application Capacity kbps					Application Config		
AT Max Power	23 dBm/1.23MHz						F-Traffic Format 4 (1024,2,128) (307.2k, QPSK)		
							R-Data Pkt Size 128 bits		
		Active Cell Idle					Sys Type: IS-856		
1 of 3							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