

Appendix F. FCC 3G SAR Measurement Procedures

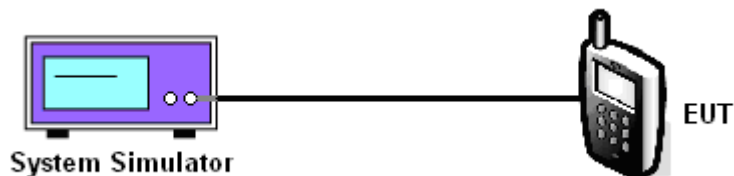
Conducted Output Power:

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 BC0	FCH	1	1	1	55	Full	All Up	24.20	24.19	24.25
		3	3	3	55	Full	All Up	24.14	24.10	24.12
		3	3	3	32	Full	All Up	24.11	24.13	24.09
	FCH+SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	24.01	23.98	23.99
	EVDO Rev.0	Subtype:0/1				RTAP 153.6	All Up	24.19	24.20	24.18
	EVDO Rev.A	Subtype:2				RETAP 4096	All Up	24.22	24.24	24.23

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:		FCH Service Option Setup				Value		Cell Power	
		Service Option for Fwd1 Rvs1				S055 (Loopback)		-86.00	
		Service Option for Fwd1 Rvs1				S09 (Loopback)		dBm/1.23 MHz	
		Service Option for Fwd1 Rvs1				S055 (Loopback)		Cell Band	
		Service Option for Fwd1 Rvs1				S055 (Loopback)		US PCS	
		Service Option for Fwd1 Rvs1				S055 (Loopback)		Channel	
		Service Option for Fwd1 Rvs1				S055 (Loopback)		1175	
		Service Option for Fwd1 Rvs1				S055 (Loopback)		Protocol Rev	
		Service Option for Fwd1 Rvs1				S055 (Loopback)		6 (IS-2000-0)	
		Service Option for Fwd1 Rvs1				S055 (Loopback)		Radio Config	
Service Option for Fwd1 Rvs1				S055 (Loopback)		(Fwd1, Rvs1)			
Service Option for Fwd1 Rvs1				S055 (Loopback)		S055 (Loopback)			
Service Option for Fwd1 Rvs1				S055 (Loopback)		FCH Service Option Setup			
Close Menu		Active Cell Idle				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	
Close Menu		Mobile Station Information ESN (Hex): ESN (Dec): MCC: MNC: 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							
(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	
Close Menu		Mobile Station Information ESN (Hex): ESN (Dec): MCC: MNC: 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							
(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): Access Terminal Information (AN Assigned) UATI 024: ---- UATI Color Code: ---- NAC Index: ---- Protocol Release Session App: 0 (1xEV-DO) Test Applica: A (1xEV-DO-A) Limited TAP: B (1xEV-DO-B) AT Directed: DRC Value Fi: ACK Channel:					Rvs Power Ctrl		
Active Cell							Active bits		
							Pur Ctrl Step	1.0 dB	
Start Data Connection							Call Drop Timer	On	
		Call Limit Mode	Off						
Close Session		Protocol Rel	0 (1xEV-DO)						
Handoff Setup									
AT Max Power	23 dBm/1.23MHz								
		Active Cell	Idle						
		Sys Type: IS-856							
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): Access Terminal Information (AN Assigned) UATI 024: ---- UATI Color Code: ---- NAC Index: ---- RTAP Rate Session App: 9.6 kbps Test Applica: 19.2 kbps Limited TAP: 38.4 kbps AT Directed: 76.8 kbps DRC Value Fi: 153.6 kbps ACK Channel:					Cell Power	-86.00	
Active Cell							dBm/1.23 MHz		
							Cell Band	US PCS	
Start Data Connection							Channel	1175	
		Application Config							
Close Session		FTAP Rate	307.2 kbps						
Handoff Setup		(2 Slot, QPSK)							
AT Max Power	23 dBm/1.23MHz	RTAP Rate	9.6 kbps						
		Active Cell	Idle						
		Sys Type: IS-856							
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	-86.00	
		Session Seed:					dBm/1.23 MHz		
		Hardware ID Type (Hex):					Cell Band	US PCS	
		Hardware ID (Hex):							
		Hardware ID (Decimal):					Channel	1175	
		Access Terminal Information (AN Assigned)							
Start Data Connection		UATI 024: ----							
		UATI Color Code: ----							
		MAC Index: ----							
		Application Configuration							
		Session App: R-Data Packet Size					Application	Application Config	
		Enhanced Te: 128					AP	F-Traffic Format	
		AT Directed: 256					%	4 (1024,2,128)	
		DRC Value Fi: 512						(307.2k, QPSK)	
		ACK Channel: 768						R-Data Pkt Size	
		ACK Channel: 768						128	
		Reverse Data: 1024					Capacity	bits	
		Expected En: 1536					kbps		
AT Max Power	23 dBm/1.23MHz	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