

Appendix F. FCC 3G SAR Measurement Procedures

Conducted Output Power:

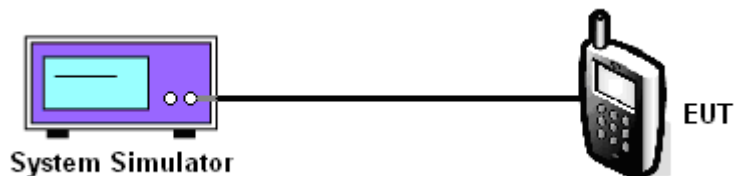
The EUT was tested according to the requirements of the FCC 3G procedures and the 3.1.2.3.4.

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	24.11	24.09	23.90
		3	3	3	55	Full	All Up	24.10	24.08	23.88
		3	3	3	32	Full	All Up	24.09	24.07	23.87
	FCH+SCH	3	3	3	32	Full	All Up	24.05	24.08	23.84
	EVDO Rev.0*	Subtype:0				RTAP 153.6	All Up	23.99	23.95	23.84
	EVDO Rev.A*	Subtype:0				RETAP 4096	All Up	24.21	24.06	23.90

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)				25	600	1175
CDMA2000 PCS	FCH	1	1	1	55	Full	All Up	24.18	24.07	24.58
		3	3	3	55	Full	All Up	24.21	24.05	24.45
		3	3	3	32	Full	All Up	24.12	24.01	24.47
	FCH+SCH	3	3	3	32	Full	All Up	24.14	24.04	24.48
	EVDO Rev.0*	Subtype:0				RTAP 153.6	All Up	24.17	24.03	24.51
	EVDO Rev.A*	Subtype:0				RETAP 4096	All Up	24.19	24.09	24.62

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 Parm		
Close Menu		Mobile Station Information ESN (Hex): ESN (Dec): NCC: INC: NSIN: Slot Class: Slot Cycle Index: ---- Protocol Revision:					Cell Power -86.00 dBm/1.23 MHz Cell Band US PCS Channel 1175		
		FCH Service Option Setup Service Option Service Option f Service Option f Service Option f Service Option f Service Option f Service Option f Service Option f Service Option f					Value S055 (Loopback) S09 (Loopback) S055 (Loopback) S055 (Loopback) S055 (Loopback) S055 (Loopback) S055 (Loopback) S055 (Loopback) S055 (Loopback)		
		S01 (Voice) S02 (Loopback) S03 (Voice) S06 (SMS) S055 (Loopback) S068 (Voice)					Protocol Rev 6 (IS-2000-0) Radio Config (Fud1, Rvs1) S055 (Loopback)		
		Active Cell Idle IntRef Offset					Sys Type: IS-2000 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):					Rvs Power Ctrl		
Active Cell							Active bits		
							Pur Ctrl Step		
							1.0 dB		
Start Data Connection		Access Terminal Information (AN Assigned) UATI 024: UATI Color Code: NAC Index:					Call Drop Timer		
							On		
Close Session							Call Limit Mode		
							Off		
Handoff Setup		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:					Protocol Rel		
							0 (1xEV-DO)		
AT Max Power									
23 dBm/1.23MHz									
		Active Cell		Sys Type: IS-856					
		Idle							
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		
Active Cell							-86.00		
							dBm/1.23 MHz		
							Cell Band		
Start Data Connection		Access Terminal Information (AN Assigned) UATI 024: UATI Color Code: NAC Index:					US PCS		
							Channel		
Close Session							1175		
							Application Config		
Handoff Setup		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:					FTAP Rate		
							307.2 kbps		
AT Max Power							(2 Slot, QPSK)		
23 dBm/1.23MHz							RTAP Rate		
		Active Cell		Sys Type: IS-856		9.6 kbps			
		Idle							
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 Parms		
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 Application Enhanced Te: 128 AT Directed: 256 DRC Value Fi: 512 ACK Channel: 768 ACK Channel: 1024 Reverse Data: 1536 Expected En: 1536					Channel 1175		
Handoff Setup		Capacity kbps					Application Config		
AT Max Power	23 dBm/1.23MHz						F-Traffic Format 4 (1024,2,128) (307.2k, QPSK)		
		Active Cell Idle					R-Data Pkt Size 128 bits		
1 of 3									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