

Appendix G. FCC CDMA2000 SAR Measurement Procedures

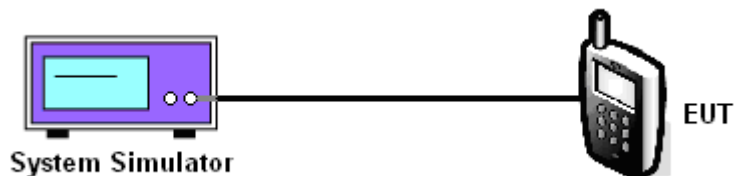
Conducted Output Power:

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	22.88	22.74	22.71
		3	3	3	55	Full	All Up	22.91	22.60	22.75
	FCH+SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	22.86	22.75	22.82
	EVDO Rev.0	Subtype:0/1				RTAP 9.6	All Up	22.67	22.53	22.52
	EVDO Rev.0	Subtype:0/1				RTAP 38.4	All Up	22.69	22.52	22.50
	EVDO Rev.0	Subtype:0/1				RTAP 153.6	All Up	22.75	22.65	22.57
	EVDO Rev.A	Subtype:2				RETAP 128	All Up	22.58	22.20	22.23
	EVDO Rev.A	Subtype:2				RETAP 2048	All Up	22.53	22.26	22.28
	EVDO Rev.A	Subtype:2				RETAP 12288	All Up	22.42	22.31	22.19

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	24.13	24.14	23.81
		3	3	3	55	Full	All Up	24.18	24.15	23.93
	FCH+SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	24.11	24.16	23.67
	EVDO Rev.0	Subtype:0/1				RTAP 9.6	All Up	23.93	24.03	23.38
	EVDO Rev.0	Subtype:0/1				RTAP 38.4	All Up	23.84	24.07	23.31
	EVDO Rev.0	Subtype:0/1				RTAP 153.6	All Up	23.94	23.93	23.25
	EVDO Rev.A	Subtype:2				RETAP 128	All Up	23.66	23.78	23.02
	EVDO Rev.A	Subtype:2				RETAP 2048	All Up	23.50	23.74	22.87
	EVDO Rev.A	Subtype:2				RETAP 12288	All Up	23.47	23.73	22.86

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): 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 (Fud1, Rvs1)		
							S055 (Loopback)		
							FCH Service Option Setup		
							Value		
							S055 (Loopback)		
							S09 (Loopback)		
					S01 (Voice)				
					S02 (Loopback)				
					S03 (Voice)				
					S06 (SMS)				
					S055 (Loopback)				
					S068 (Voice)				
		Active Cell Idle			Sys Type: IS-2000				
		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)			
						FCH Service Option Setup			
						1 of 4			
Close Menu		Service Option S01 (Voice) S02 (Loopback) S03 (Voice) S06 (SMS) S055 (Loopback) S032 (+ F-SCH)				Value S055 (Loopback) S09 (Loopback) S055 (Loopback) S055 (Loopback) S055 (Loopback)			
		Active Cell				Sys Type: IS-2000			
		Idle							
		IntRef Offset							

1xRTT setting for Radio Configuration 3 with Service Option 55

Call Setup Screen									
Call Control		Active Cell Operating Mode						Call Parms	
		Mobile Station Information						Cell Power	
		ESN (Hex):						-86.00	
		ESN (Dec):						dBm/1.23 MHz	
		MCC:						Cell Band	
		MNC:						US PCS	
		MSIN:						Channel	
		Slot Class:						1175	
		Slot Cycle Index: ----						Protocol Rev	
Protocol Revision:						6 (IS-2000-0)			
		FCH Service Option Setup				Value		Radio Config	
		Service Option f... Full Duplex				S055 (Loopback)		(Fud3, Rvs3)	
		Service Option f... Service Option				S09 (Loopback)		S032 (+ SCH)	
		Service Option f... S02 (Loopback)				S032 (+ SCH)		S032 (+ SCH)	
		Service Option f... S03 (Voice)				S055 (Loopback)			
		Service Option f... S06 (SMS)				S055 (Loopback)			
		Service Option f... S055 (Loopback)				S055 (Loopback)			
		S032 (+ F-SCH)							
		S032 (+ SCH)						FCH Service Option Setup	
Close Menu									
		Active Cell Idle				Sys Type: IS-2000			
		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) 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)		
		Active Cell Idle					R-Data Pkt Size 128 bits		
		Sys Type: IS-856							
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