

Appendix E. FCC 3G SAR Measurement Procedures

Conducted Output Power:

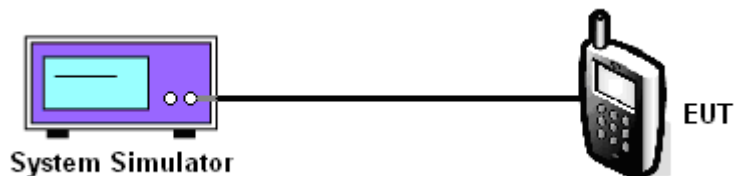
The EUT was tested according to the requirements of the FCC 3G procedures and the 3.1.2.3.4.

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	24.60	24.24	23.96
		3	3	3	55	Full	All Up	24.66	24.24	24.04
		3	3	3	32	Full	All Up	24.59	24.22	23.94
	FCH+SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	24.57	24.23	23.92
	EVDO Rev.0	Subtype:0/1				RTAP 153.6	All Up	24.64	24.35	23.93
	EVDO Rev.A	Subtype:2				RETAP 4096	All Up	24.65	24.33	23.98

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 BC1	FCH	1	1	1	55	Full	All Up	23.88	23.75	23.98
		3	3	3	55	Full	All Up	23.98	23.76	24.09
		3	3	3	32	Full	All Up	23.93	23.75	23.94
	FCH+SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	23.91	23.78	23.92
	EVDO Rev.0	Subtype:0/1				RTAP 153.6	All Up	24.03	23.92	24.08
	EVDO Rev.A	Subtype:2				RETAP 4096	All Up	24.01	23.94	24.06

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)				476	580	684
CDMA2000 BC10	FCH	1	1	1	55	Full	All Up	24.50	24.49	24.41
		3	3	3	55	Full	All Up	24.53	24.51	24.52
		3	3	3	32	Full	All Up	24.52	24.48	24.49
	FCH+SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	24.49	24.26	24.47
	EVDO Rev.0	Subtype:0/1				RTAP 153.6	All Up	24.52	24.5	24.51
	EVDO Rev.A	Subtype:2				RETAP 4096	All Up	24.51	24.49	24.52

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		
	Mobile Station Information						Cell Power		
	ESN (Hex):						-86.00		
	ESN (Dec):						dBm/1.23 MHz		
	NCC:						Cell Band		
	INC:						US PCS		
	NSIN:						Channel		
	Slot Class:						1175		
	Slot Cycle Index: ----						Protocol Rev		
	Protocol Revision:						6 (IS-2000-0)		
	FCH Service Option Setup						Value		
Service Option for Fud1, Rvs1						S055 (Loopback)			
Service Option for S01 (Voice)						S09 (Loopback)			
Service Option for S02 (Loopback)						S055 (Loopback)			
Service Option for S03 (Voice)						S055 (Loopback)			
Service Option for S06 (SMS)						S055 (Loopback)			
S055 (Loopback)						Radio Config			
S068 (Voice)						(Fud1, Rvs1)			
Close Menu							S055 (Loopback)		
							FCH Service Option Setup		
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	
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							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							
Handoff Setup									
AT Max Power	23 dBm/1.23MHz	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):					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					RTAP Rate	9.6 kbps	
Handoff Setup									
AT Max Power	23 dBm/1.23MHz	Sys Type: IS-856							
		1 of 3		IntRef	Offset		PLSub0	RTAP	1 of 3

1xEV-DO setting for RTAP data rate



Call Setup Screen						
Call Control	Active Cell Operating Mode				Call Parms	
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	
Start Data Connection	Access Terminal Information (AN Assigned) UATI 024: ---- UATI Color Code: ---- MAC Index: ----				dBm/1.23 MHz	
					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 768 Reverse Data 1024 Expected En 1536				Channel	
					1175	
Handoff Setup					Application Config	
AT Max Power					F-Traffic Format	
23 dBm/1.23MHz					4 (1024,2,128)	
					(307.2k, QPSK)	
					R-Data Pkt Size	
					128	
					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



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