

Appendix F. FCC 3G SAR Measurement Procedures

Conducted Output Power:

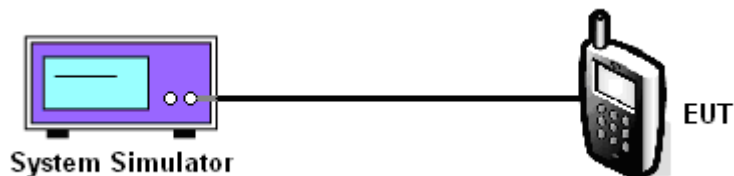
The EUT was tested according to the requirements of the FCC 3G procedures and the 3.1.2.3.4.

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	23.78	23.53	23.69
		3	3	3	55	Full	All Up	23.95	23.54	23.74
	FCH+SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	23.86	23.52	23.74
	EVDO Rev.0*	Subtype:0				RTAP 9.6	All Up	23.93	23.67	23.93
	EVDO Rev.0*	Subtype:0				RTAP 38.4	All Up	23.92	23.73	23.93
	EVDO Rev.0*	Subtype:0				RTAP 153.6	All Up	23.82	23.84	23.87
	EVDO Rev.A*	Subtype:0				RETAP 128	All Up	23.84	23.56	23.61
	EVDO Rev.A*	Subtype:0				RETAP 2048	All Up	23.91	23.89	23.94
	EVDO Rev.A*	Subtype:0				RETAP 12288	All Up	23.92	23.91	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	22.41	22.38	22.29
		3	3	3	55	Full	All Up	22.59	22.45	22.35
	FCH+SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	22.48	22.41	22.30
	EVDO Rev.0*	Subtype:0				RTAP 9.6	All Up	22.46	22.42	22.40
	EVDO Rev.0*	Subtype:0				RTAP 38.4	All Up	22.49	22.48	22.36
	EVDO Rev.0*	Subtype:0				RTAP 153.6	All Up	22.53	22.52	22.44
	EVDO Rev.A*	Subtype:0				RETAP 128	All Up	22.41	22.31	22.12
	EVDO Rev.A*	Subtype:0				RETAP 2048	All Up	22.57	22.50	22.48
	EVDO Rev.A*	Subtype:0				RETAP 12288	All Up	22.49	22.58	22.55

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
	Mobility 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)
Close Menu	FCH Service Option Setup					Value	Radio Config
	Service Option f					S055 (Loopback)	(Fud1, Rvs1)
	Service Option f					S09 (Loopback)	S055 (Loopback)
	Service Option f					S055 (Loopback)	
	Service Option f					S055 (Loopback)	
	Service Option f					S055 (Loopback)	FCH Service Option Setup
	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 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	
								Sys Type: IS-2000	
								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)	
								FCH Service Option Setup	
								Sys Type: IS-2000	
								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		
Close Session							Call Limit Mode		
							Off		
Handoff Setup							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): 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		
Active Cell							-86.00		
							dBm/1.23 MHz		
							Cell Band		
Start Data Connection							US PCS		
							Channel		
Close Session							1175		
							Application Config		
Handoff Setup							FTAP Rate		
							307.2 kbps		
AT Max Power							(2 Slot, QPSK)		
23 dBm/1.23MHz							RTAP Rate		
							9.6 kbps		
		Active Cell		Sys Type: IS-856					
		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 Params	
Operating Mode	Access Terminal Information (AT Reported)			Cell Power	
Active Cell				-86.00	
	Session Seed:			dBm/1.23 MHz	
	Hardware ID Type (Hex):			Cell Band	
	Hardware ID (Hex):			US PCS	
	Hardware ID (Decimal):			Channel	
	Access Terminal Information (AN Assigned)			1175	
Start Data Connection	UATI 024: ----				
	UATI Color Code: ----			Application Config	
	MAC Index: ----			F-Traffic Format	
Close Session	Application Configuration			4 (1024,2,128)	
	Session App: R-Data Packet Size			(307.2k, QPSK)	
	Enhanced Te: 128			R-Data Pkt Size	
	AT Directed: 256			128	
	DRC Value Fi: 512			bits	
Handoff Setup	ACK Channel: 768				
	ACK Channel: 1024				
AT Max Power	Reverse Data: 1536				
23 dBm/1.23MHz	Expected En: 1536				
	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