

Appendix G. FCC 3G SAR Measurement Procedures

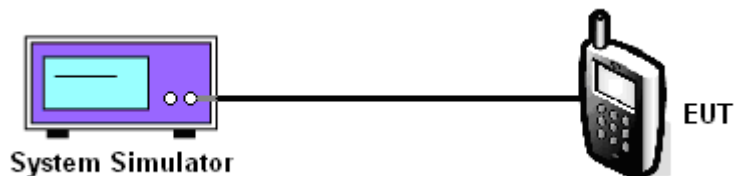
Conducted Output Power:

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	23.81	23.78	23.71
		3	3	3	55	Full	All Up	23.70	23.84	23.71
		3	3	3	32	Full	All Up	23.82	23.82	23.73
	FCH+SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	23.82	23.80	23.68
	EVDO Rev.0	Subtype:0				RTAP 153.6	All Up	23.73	23.80	23.76
	EVDO Rev.A	Subtype:0				RETAP 4096	All Up	23.79	23.95	23.82

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	24.06	24.01	23.87
		3	3	3	55	Full	All Up	24.00	23.94	23.79
		3	3	3	32	Full	All Up	23.99	23.96	23.79
	FCH+SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	23.99	23.95	23.83
	EVDO Rev.0	Subtype:0				RTAP 153.6	All Up	23.95	23.89	23.66
	EVDO Rev.A	Subtype:0				RETAP 4096	All Up	23.96	23.95	23.78

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 Params	
		Mobile Station Information						Cell Power	
		ESN (Hex):						-86.00	
		ESN (Dec):						dBm/1.23 MHz	
		NCC:						Cell Band	
		NMC:						US PCS	
		NSIN:						Channel	
		Slot Class:						1175	
		Slot Cycle Index: ----						Protocol Rev	
		Protocol Revision:						6 (IS-2000-0)	
		Close Menu		FCH Service Option Setup				Value	
Service Option for Fud3, Rvs3				S055 (Loopback)		S055 (Loopback)			
Service Option for S01 (Voice)				S09 (Loopback)		Fud3, Rvs3			
Service Option for S02 (Loopback)				S055 (Loopback)		S055 (Loopback)			
Service Option for S03 (Voice)				S055 (Loopback)		S055 (Loopback)			
Service Option for S06 (SIS)				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	
		Mobile Station Information						Cell Power	
		ESN (Hex):						-86.00	
		ESN (Dec):						dBm/1.23 MHz	
		NCC:						Cell Band	
		NMC:						US PCS	
		NSIN:						Channel	
		Slot Class:						1175	
		Slot Cycle Index: ----						Protocol Rev	
		Protocol Revision:						6 (IS-2000-0)	
		Close Menu		FCH Service Option Setup				Value	
Service Option for Fud3, Rvs3				S055 (Loopback)		S055 (Loopback)			
Service Option for S02 (Loopback)				S09 (Loopback)		Fud3, Rvs3			
Service Option for S03 (Voice)				S032 (+ SCH)		S032 (+ SCH)			
Service Option for S06 (SIS)				S055 (Loopback)		S055 (Loopback)			
S055 (Loopback)									
S032 (+ F-SCH)									
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 0 (1xEV-DO) Application A (1xEV-DO-A) 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 9.6 kbps Application 19.2 kbps 38.4 kbps 76.8 kbps 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	
		Session Seed:			-86.00	
		Hardware ID Type (Hex):			dBm/1.23 MHz	
		Hardware ID (Hex):			Cell Band	
		Hardware ID (Decimal):			US PCS	
		Access Terminal Information (AN Assigned)			Channel	
Start Data Connection		UATI 024: ----			1175	
		UATI Color Code: ----				
		MAC Index: ----				
		Application Configuration			Application Config	
Close Session		Session App: R-Data Packet Size			Application	
		Enhanced Te: 128			AP	
		AT Directed: 256			Z	
		DRC Value Fi: 512				
Handoff Setup		ACK Channel: 768			Capacity	
		ACK Channel: 768			kbps	
		Reverse Data: 1024				
AT Max Power		Expected En: 1536			bits	
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