

Appendix G. FCC 3G SAR Measurement Procedures

Conducted Output Power:

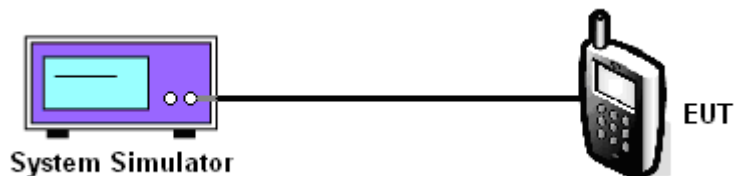
The EUT was tested according to the requirements of the FCC 3G procedures and the 3.1.2.3.4.

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		
	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	
		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)		S055 (Loopback)			
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)		S055 (Loopback)			
S055 (Loopback)						FCH Service Option Setup			
S032 (+ F-SCH)						1 of 4			
		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 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)		S055 (Loopback)			
Service Option for S03 (Voice)				S032 (+ SCH)		S055 (Loopback)			
Service Option for S06 (SIS)				S055 (Loopback)		S055 (Loopback)			
S055 (Loopback)						FCH Service Option Setup			
S032 (+ F-SCH)						1 of 4			
S032 (+ SCH)									
		Active Cell				Sys Type: IS-2000			
		Idle							
		IntRef Offset							

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	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: ----							
	Close Session	Application Configuration					Application Config		
		R-Data Packet Size					F-Traffic Format		
		Session App: 128					4 (1024,2,128)		
		Enhanced Te: 256					(307.2k, QPSK)		
		AT Directed: 512					R-Data Pkt Size		
		DRC Value F: 768					128		
	Handoff Setup	ACK Channel: 1024					bits		
		ACK Channel: 1536							
	AT Max Power	Expected En: 1536							
	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