

Appendix F. FCC 3G SAR Measurement Procedures

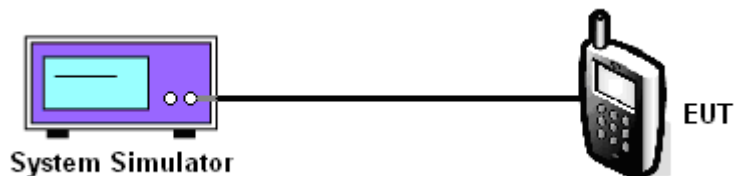
Conducted Output Power:

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	24.00	23.97	23.99
		3	3	3	55	Full	All Up	24.13	24.10	24.11

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): NCC: INC: NSIN: Slot Class: Slot Cycle Index: ---- Protocol Revision:					Cell Power -86.00 dBm/1.23 MHz Cell Band US PCS Channel 1175		
		FCH Service Option Setup Service Option Service Option f Service Option f Service Option f Service Option f Service Option f Service Option f Service Option f Service Option f					Value S055 (Loopback) S09 (Loopback) S055 (Loopback) S055 (Loopback) S055 (Loopback) S055 (Loopback) S055 (Loopback) S055 (Loopback) S055 (Loopback)		
		S01 (Voice) S02 (Loopback) S03 (Voice) S06 (SMS) S055 (Loopback) S068 (Voice)					Protocol Rev 6 (IS-2000-0) Radio Config (Fud1, Rvs1) S055 (Loopback)		
		Active Cell Idle IntRef Offset					Sys Type: IS-2000 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																			
		FCH Service Option Setup <table border="1"> <thead> <tr> <th>Service Option</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>S055 (Loopback)</td> <td>S055 (Loopback)</td> </tr> <tr> <td>S09 (Loopback)</td> <td>S09 (Loopback)</td> </tr> <tr> <td>S01 (Voice)</td> <td>S055 (Loopback)</td> </tr> <tr> <td>S02 (Loopback)</td> <td>S055 (Loopback)</td> </tr> <tr> <td>S03 (Voice)</td> <td>S055 (Loopback)</td> </tr> <tr> <td>S06 (SRS)</td> <td>S055 (Loopback)</td> </tr> <tr> <td>S055 (Loopback)</td> <td></td> </tr> <tr> <td>S032 (+ F-SCH)</td> <td></td> </tr> </tbody> </table>						Service Option	Value	S055 (Loopback)	S055 (Loopback)	S09 (Loopback)	S09 (Loopback)	S01 (Voice)	S055 (Loopback)	S02 (Loopback)	S055 (Loopback)	S03 (Voice)	S055 (Loopback)	S06 (SRS)	S055 (Loopback)	S055 (Loopback)		S032 (+ F-SCH)		Cell Band US PCS	
		Service Option	Value																								
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S032 (+ F-SCH)																											
Active Cell Idle						Channel 1175																					
Sys Type: IS-2000						Protocol Rev 6 (IS-2000-0)																					
IntRef Offset						Radio Config (Fud3, Rvs3) S055 (Loopback)																					
IntRef Offset						FCH Service Option Setup																					
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																			
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IntRef Offset						Radio Config (Fud3, Rvs3) S032 (+ SCH)																					
IntRef Offset						FCH Service Option Setup																					
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
Close Session		Application Config							
Handoff Setup		FTAP Rate	307.2 kbps						
AT Max Power	23 dBm/1.23MHz	RTAP Rate	9.6 kbps						
1 of 3		Active Cell Idle Sys Type: IS-856							
		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 Parms	
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	
		UATI 024: ----			1175	
		UATI Color Code: ----				
		MAC Index: ----				
Start Data Connection		Application Configuration			Application Config	
		Session App: R-Data Packet Size			Application	
		Enhanced Te: 128			AP	
		AT Directed: 256			Z	
		DRC Value Fi: 512				
		ACK Channel: 768				
		ACK Channel: 768				
		Reverse Data: 1024			Capacity	
		Expected En: 1536			kbps	
Close Session		Active Cell			Sys Type: IS-856	
		Idle				
Handoff Setup		IntRef			PLSub0	
		Offset			RETAP	
AT Max Power					1 of 3	
23 dBm/1.23MHz						
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