



Appendix G. FCC 3G SAR Measurement Procedures

Conducted Output Power:

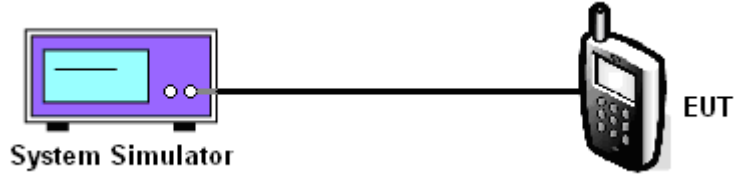
The EUT was tested according to the requirements of the FCC 3G procedures and the 3.1.2.3.4.

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	23.71	23.73	23.83
		3	3	3	55	Full	All Up	23.74	23.86	23.84
		3	3	3	32	Full	All Up	23.72	23.75	23.85
	SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	23.72	23.86	23.87
	EVDO Rev.0	Subtype:0				RTAP 153.6	All Up	23.88	23.89	24.07
	EVDO Rev.A	Subtype:0				RETAP 4096	All Up	23.88	23.90	24.04

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	23.97	23.41	23.62
		3	3	3	55	Full	All Up	23.94	23.79	23.60
		3	3	3	32	Full	All Up	23.96	23.79	23.66
	SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	23.96	23.81	23.63
	EVDO Rev.0	Subtype:0				RTAP 153.6	All Up	24.13	24.00	23.81
	EVDO Rev.A	Subtype:0				RETAP 4096	All Up	24.10	24.06	23.82

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				Cell Power	-86.00
	ESN (Hex):				dBm/1.23 MHz	
	ESN (Dec):				Cell Band	US PCS
	NCC:				Channel	1175
	NMC:				Protocol Rev	6 (IS-2000-0)
	NSIN:				Radio Config	(Fud1, Rus1)
	Slot Class:				FCH Service Option Setup	S055 (Loopback)
	Slot Cycle Index: ----				Service Option	S09 (Loopback)
	Protocol Revision:				Service Option f	S01 (Voice)
					Service Option f	S02 (Loopback)
				Service Option f	S03 (Voice)	
				Service Option f	S06 (SIS)	
				Service Option f	S055 (Loopback)	
				Service Option f	S068 (Voice)	
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 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																		
	FCH Service Option Setup		Protocol Rev 6 (IS-2000-0)																		
	<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 (SIS)</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 (SIS)	S055 (Loopback)	S055 (Loopback)		S032 (+ F-SCH)		Radio Config (Fud3, Rvs3) S055 (Loopback)
	Service Option	Value																			
	S055 (Loopback)	S055 (Loopback)																			
	S09 (Loopback)	S09 (Loopback)																			
	S01 (Voice)	S055 (Loopback)																			
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	S06 (SIS)	S055 (Loopback)																			
S055 (Loopback)																					
S032 (+ F-SCH)																					
Active Cell Idle		Sys Type: IS-2000																			
IntRef Offset		FCH Service Option Setup																			
		1 of 4																			

1xRTT setting for Radio Configuration 3 with Service Option 55

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																		
	FCH Service Option Setup		Protocol Rev 6 (IS-2000-0)																		
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Active Cell Idle		Sys Type: IS-2000																			
IntRef Offset		FCH Service Option Setup																			
		1 of 4																			

1xRTT setting for Radio Configuration 3 with Service Option 32



Call Setup Screen						
Call Control	Active Cell Operating Mode				Call Parm	
Operating Mode	Access Terminal Information (AT Reported) Session Seed: Hardware ID Type (Hex): Hardware ID (Hex): Hardware ID (Decimal):				Rvs Power Ctrl	
Active Cell					Active bits	
Start Data Connection	Access Terminal Information (AN Assigned) UATI 024: ---- UATI Color Code: ---- NAC Index: ----				Pur Ctrl Step	
					1.0 dB	
Close Session	Protocol Release Session App: 0 (1xEV-DO) Application Test Applica: A (1xEV-DO-A) Limited TAP: B (1xEV-DO-B) AT Directed: % DRC Value Fi: ACK Channel:				Call Drop Timer	
					On	
Handoff Setup	Active Cell: Idle Sys Type: IS-856				Call Limit Mode	
					Off	
AT Max Power	23 dBm/1.23MHz				Protocol Rel	
					0 (1xEV-DO)	
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 Parm	
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: ---- NAC Index: ----				dBm/1.23 MHz	
					Cell Band	
Close Session	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:				US PCS	
					Channel	
Handoff Setup	Active Cell: Idle Sys Type: IS-856				1175	
					Application Config	
AT Max Power	23 dBm/1.23MHz				FTAP Rate	
					307.2 kbps	
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	Session Seed: Hardware ID Type (Hex): Hardware ID (Hex): Hardware ID (Decimal):				-86.00															
	Access Terminal Information (AM Assigned)				dBm/1.23 MHz															
Start Data Connection	UATI 024: ---- UATI Color Code: ---- MAC Index: ----				Cell Band															
	Application Configuration				US PCS															
Close Session	<table border="1"> <thead> <tr> <th>R-Data Packet Size</th> <th>Application</th> </tr> </thead> <tbody> <tr> <td>128</td> <td>AP</td> </tr> <tr> <td>256</td> <td>Z</td> </tr> <tr> <td>512</td> <td></td> </tr> <tr> <td>768</td> <td></td> </tr> <tr> <td>1024</td> <td></td> </tr> <tr> <td>1536</td> <td>Capacity</td> </tr> </tbody> </table>				R-Data Packet Size	Application	128	AP	256	Z	512		768		1024		1536	Capacity	Channel	
R-Data Packet Size	Application																			
128	AP																			
256	Z																			
512																				
768																				
1024																				
1536	Capacity																			
Handoff Setup					1175															
AT Max Power					Application Config															
23 dBm/1.23MHz					F-Traffic Format															
	Active Cell				4 (1024,2,128)															
	Idle				(307.2k, QPSK)															
	Sys Type: IS-856				R-Data Pkt Size															
	IntRef Offset				128															
1 of 3	PLSub0 RETAP				bits															
					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