



Appendix F. FCC 3G SAR Measurement Procedures

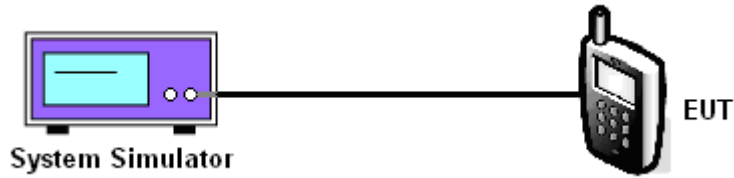
Conducted Output Power:

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 BC0	FCH	1	1	1	55	Full	All Up	24.20	24.19	24.25
		3	3	3	55	Full	All Up	24.14	24.10	24.12
		3	3	3	32	Full	All Up	24.11	24.13	24.09
	FCH+SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	24.01	23.98	23.99
	EVDO Rev.0	Subtype:0/1				RTAP 153.6	All Up	24.19	24.20	24.18
	EVDO Rev.A	Subtype:2				RETAP 4096	All Up	24.22	24.24	24.23

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
	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)
	FCH Service Option Setup		Value
Service Option f		S055 (Loopback)	(Fud1, Rvs1)
Service Option f		S09 (Loopback)	S055 (Loopback)
Service Option f		S01 (Voice)	S055 (Loopback)
Service Option f		S02 (Loopback)	S055 (Loopback)
Service Option f		S03 (Voice)	S055 (Loopback)
Service Option f		S06 (SMS)	S055 (Loopback)
Service Option f		S055 (Loopback)	FCH Service Option Setup
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>S01 (Voice)</td> <td>S055 (Loopback)</td> </tr> <tr> <td>S02 (Loopback)</td> <td>S09 (Loopback)</td> </tr> <tr> <td>S03 (Voice)</td> <td>S055 (Loopback)</td> </tr> <tr> <td>S06 (SMS)</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	S01 (Voice)	S055 (Loopback)	S02 (Loopback)	S09 (Loopback)	S03 (Voice)	S055 (Loopback)	S06 (SMS)	S055 (Loopback)	S055 (Loopback)		S032 (+ F-SCH)		Radio Config (Fud3, Rvs3) S055 (Loopback)
	Service Option	Value															
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	S03 (Voice)	S055 (Loopback)															
	S06 (SMS)	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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	S055 (Loopback)	S055 (Loopback)															
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	S032 (+ 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 32



Call Setup Screen																																		
Call Control	Active Cell Operating Mode	Call Parm																																
Operating Mode	<table border="1"> <thead> <tr> <th colspan="2">Access Terminal Information (AT Reported)</th> </tr> </thead> <tbody> <tr> <td>Session Seed:</td> <td></td> </tr> <tr> <td>Hardware ID Type (Hex):</td> <td></td> </tr> <tr> <td>Hardware ID (Hex):</td> <td></td> </tr> <tr> <td>Hardware ID (Decimal):</td> <td></td> </tr> <tr> <th colspan="2">Access Terminal Information (AN Assigned)</th> </tr> <tr> <td>UATI 024:</td> <td>----</td> </tr> <tr> <td>UATI Color Code:</td> <td>----</td> </tr> <tr> <td>MAC Index:</td> <td>----</td> </tr> <tr> <th colspan="2">Protocol Release</th> </tr> <tr> <td>Session App:</td> <td>0 (1xEV-DO) Application</td> </tr> <tr> <td>Test Applica:</td> <td>A (1xEV-DO-A)</td> </tr> <tr> <td>Limited TAP:</td> <td>B (1xEV-DO-B)</td> </tr> <tr> <td>AT Directed:</td> <td></td> </tr> <tr> <td>DRC Value Fi:</td> <td></td> </tr> <tr> <td>ACK Channel:</td> <td></td> </tr> </tbody> </table>	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:	----	MAC Index:	----	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:		Bus Power Ctrl
Access Terminal Information (AT Reported)																																		
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AT Directed:																																		
DRC Value Fi:																																		
ACK Channel:																																		
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 Parm																																
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Access Terminal Information (AT Reported)																																		
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DRC Value Fi:	153.6 kbps																																	
ACK Channel:																																		
Active Cell		-86.00																																
		dBm/1.23 MHz																																
		Cell Band																																
		US PCS																																
Start Data Connection		Channel																																
		1175																																
Close Session		Application Config																																
Handoff Setup		FTAP Rate																																
		307.2 kbps																																
		(2 Slot, QPSK)																																
AT Max Power		RTAP Rate																																
23 dBm/1.23MHz		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 Parms															
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