

## Appendix F. FCC 3G SAR Measurement Procedures

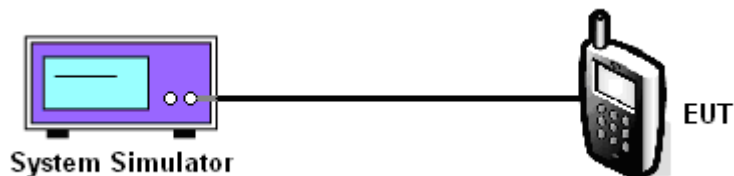
### Conducted Output Power:

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	23.19	23.01	23.38
		3	3	3	55	Full	All Up	23.22	23.09	23.34
		3	3	3	32	Full	All Up	23.29	23.06	23.40
	FCH+SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	23.27	23.08	23.41
	EVDO Rev.0*	Subtype:0				RTAP 153.6	All Up	23.24	23.03	23.50
	EVDO Rev.A*	Subtype:0				RETAP 4096	All Up	23.37	23.01	23.35

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	22.55	23.27	23.54
		3	3	3	55	Full	All Up	22.71	23.30	23.44
		3	3	3	32	Full	All Up	22.68	23.23	23.67
	FCH+SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	22.60	23.21	23.56
	EVDO Rev.0*	Subtype:0				RTAP 153.6	All Up	22.80	23.44	23.84
	EVDO Rev.A*	Subtype:0				RETAP 4096	All Up	22.70	23.35	23.40

**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 Params		
<div>Close Menu</div>		<div>Mobile Station Information</div> <div>ESN (Hex):</div> <div>ESN (Dec):</div> <div>NCC:</div> <div>INC:</div> <div>NSIN:</div> <div>Slot Class:</div> <div>Slot Cycle Index: ----</div> <div>Protocol Revision:</div>					<div>Cell Power</div> <div>-86.00</div> <div>dBm/1.23 MHz</div> <div>Cell Band</div> <div>US PCS</div> <div>Channel</div> <div>1175</div>		
		<div>FCH Service Option Setup</div> <div>Service Option</div> <div>Service Option f S01 (Voice)</div> <div>Service Option f S02 (Loopback)</div> <div>Service Option f S03 (Voice)</div> <div>Service Option f S06 (SMS)</div> <div>S055 (Loopback)</div> <div>S068 (Voice)</div>					<div>Value</div> <div>S055 (Loopback)</div> <div>S09 (Loopback)</div> <div>S055 (Loopback)</div> <div>S055 (Loopback)</div> <div>S055 (Loopback)</div> <div>S055 (Loopback)</div>		
							<div>Protocol Rev</div> <div>6 (IS-2000-0)</div>		
							<div>Radio Config</div> <div>(Fud1, Rvs1)</div> <div>S055 (Loopback)</div>		
							<div>FCH Service Option Setup</div>		
		<div>Active Cell</div> <div>Idle</div>					<div>Sys Type: IS-2000</div>		
		<div>IntRef</div> <div>Offset</div>					<div>1 of 4</div>		

**1xRTT setting for Radio Configuration 1 with Service Option 55**

Call Setup Screen									
Call Control		Active Cell Operating Mode					Call Params		
<div>Close Menu</div>		<div>Mobile Station Information</div> <div>           ESN (Hex):            ESN (Dec):            MCC:            MNC:            MSIN:            Slot Class:            Slot Cycle Index: ----            Protocol Revision:         </div>					<div>Cell Power</div> <div>-86.00</div> <div>dBm/1.23 MHz</div>		
							<div>Cell Band</div> <div>US PCS</div>		
							<div>Channel</div> <div>1175</div>		
							<div>Protocol Rev</div> <div>6 (IS-2000-0)</div>		
							<div>Radio Config</div> <div>(Fud3, Rvs3)</div>		
							<div>S055 (Loopback)</div>		
							<div>FCH Service Option Setup</div>		
							<div>1 of 4</div>		

FCH Service Option Setup		Value
Service Option for Fud3, Rvs3	S055 (Loopback)	S055 (Loopback)
Service Option for Fud3, Rvs3	S09 (Loopback)	S09 (Loopback)
Service Option for Fud3, Rvs3	S01 (Voice)	S055 (Loopback)
Service Option for Fud3, Rvs3	S02 (Loopback)	S055 (Loopback)
Service Option for Fud3, Rvs3	S03 (Voice)	S055 (Loopback)
Service Option for Fud3, Rvs3	S06 (SRS)	S055 (Loopback)
Service Option for Fud3, Rvs3	S055 (Loopback)	
Service Option for Fud3, Rvs3	S032 (+ F-SCH)	

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		
<div>Close Menu</div>		<div>Mobile Station Information</div> <div>           ESN (Hex):            ESN (Dec):            MCC:            MNC:            MSIN:            Slot Class:            Slot Cycle Index: ----            Protocol Revision:         </div>					<div>Cell Power</div> <div>-86.00</div> <div>dBm/1.23 MHz</div>		
							<div>Cell Band</div> <div>US PCS</div>		
							<div>Channel</div> <div>1175</div>		
							<div>Protocol Rev</div> <div>6 (IS-2000-0)</div>		
							<div>Radio Config</div> <div>(Fud3, Rvs3)</div>		
							<div>S055 (Loopback)</div>		
							<div>FCH Service Option Setup</div>		
							<div>1 of 4</div>		

FCH Service Option Setup		Value
Service Option for Fud3, Rvs3	S055 (Loopback)	S055 (Loopback)
Service Option for Fud3, Rvs3	S02 (Loopback)	S09 (Loopback)
Service Option for Fud3, Rvs3	S03 (Voice)	S032 (+ SCH)
Service Option for Fud3, Rvs3	S06 (SRS)	S055 (Loopback)
Service Option for Fud3, Rvs3	S055 (Loopback)	S055 (Loopback)
Service Option for Fud3, Rvs3	S032 (+ F-SCH)	
Service Option for Fud3, Rvs3	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	Active Cell	<b>Access Terminal Information (AT Reported)</b> Session Seed: Hardware ID Type (Hex): Hardware ID (Hex): Hardware ID (Decimal):						Rvs Power Ctrl	Active bits
Start Data Connection		<b>Access Terminal Information (AN Assigned)</b> UATI 024: ---- UATI Color Code: ---- NAC Index: ----						Pur Ctrl Step	1.0 dB
Close Session		<b>Protocol Release</b> 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								Call Limit Mode	Off
AT Max Power	23 dBm/1.23MHz							Protocol Rel	0 (1xEV-DO)
		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	Active Cell	<b>Access Terminal Information (AT Reported)</b> Session Seed: Hardware ID Type (Hex): Hardware ID (Hex): Hardware ID (Decimal):						Cell Power	-86.00
Start Data Connection		<b>Access Terminal Information (AN Assigned)</b> UATI 024: ---- UATI Color Code: ---- NAC Index: ----						dBm/1.23 MHz	
Close Session		<b>RTAP Rate</b> 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:						Cell Band	US PCS
Handoff Setup								Channel	1175
AT Max Power	23 dBm/1.23MHz							Application Config	
		Active Cell		Sys Type: IS-856				FTAP Rate	307.2 kbps
		Idle						(2 Slot, QPSK)	
1 of 3		IntRef	Offset	PLSub0	RTAP	1 of 3		RTAP Rate	9.6 kbps

**1xEV-DO setting for RTAP data rate (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 (4096 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