

Appendix F. FCC 3G SAR Measurement Procedures

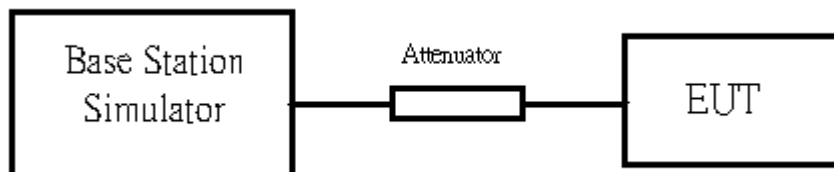
Conducted Output Power:

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	19.02	19.07	19.15
		3	3	3	55	Full	All Up	18.82	19.45	18.53
	FCH+SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	18.97	18.70	18.91
	EVDO Rev.0*	Subtype:0				UL:9.6	All Up	19.22	19.41	19.44
	EVDO Rev.0*	Subtype:0				UL:38.4	All Up	18.94	19.30	19.42
	EVDO Rev.0*	Subtype:0				UL:153.6	All Up	18.79	19.27	19.15
	EVDO Rev.A*	Subtype:0				RETAP_128Kbps	All Up	19.43	19.41	19.42
	EVDO Rev.A*	Subtype:0				RETAP_2048Kbps	All Up	19.29	19.30	19.39
	EVDO Rev.A*	Subtype:0				RETAP_4096Kbps	All Up	18.53	19.25	19.41
	EVDO Rev.A*	Subtype:0				RETAP_12288Kbps	All Up	19.37	19.44	19.42

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	17.65	17.86	17.97
		3	3	3	55	Full	All Up	17.56	17.74	18.28
	FCH+SCH	3	3	3	32	FCH:Full,SCH 9.6	All Up	17.49	17.59	17.66
	EVDO Rev.0*	Subtype:0				UL:9.6	All Up	17.98	18.14	18.19
	EVDO Rev.0*	Subtype:0				UL:38.4	All Up	17.65	17.73	17.82
	EVDO Rev.0*	Subtype:0				UL:153.6	All Up	17.55	17.65	17.69
	EVDO Rev.A*	Subtype:0				RETAP_128Kbps	All Up	18.18	18.23	18.26
	EVDO Rev.A*	Subtype:0				RETAP_2048Kbps	All Up	17.70	18.00	18.10
	EVDO Rev.A*	Subtype:0				RETAP_4096Kbps	All Up	17.89	17.87	18.16
	EVDO Rev.A*	Subtype:0				RETAP_12288Kbps	All Up	17.97	18.09	18.24

CDMA2000 Setup Configuration:

Setup Configuration

1. The EUT was connected to Base Station, 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 Base Station with following setting:
 - a. Set the test mode1 and test mode 3.
 - b. Set the Power control All Up for (FCH) and (FCH+SCH).
4. The transmitted maximum output power was recorded.

Call Setup Screen									
Call Control		Active Cell Operating Mode						Call Parms	
Close Menu	Mobile Station Information ESN (Hex):0x6C32D3AE ESN (Dec):108-03330990 NCC: NMC: NSIN:3163712588 Slot Class:Slotted Slot Cycle Index:2								Cell Power
									-86.00
									dBm/1.23 MHz
									Cell Band
									US PCS
									Channel
									1175
									Protocol Rev
									6 (IS-2000)
									Radio Config
									(Fud1, Rvs1)
									S055 (Loopback)
									FCH Service Option Setup
		FCH Service Option Setup				Value			
		Service Option for Fud1, Rvs1				S055 (Loopback)			
		Service Option for Fud2, Rvs2				S09 (Loopback)			
		Service Option for Fud3, Rvs3				S032 (+ SCH)			
		Service Option for Fud4, Rvs3				S055 (Loopback)			
		Service Option for Fud5, Rvs4				S055 (Loopback)			

Test Mode 1 in Radio Configuration 1 (FCH)

Call Setup Screen			
Call Control	Active Cell Operating Mode		Call Params
Operating Mode			Cell Power
Active Cell			-86.00
			dBm/1.23 MHz
System Type			Cell Band
IS-2000			US PCS
			Channel
End Call			1175
			Protocol Rev
Paging INSI Setup			6 (IS-2000)
			Radio Config
Handoff Setup			(Fud3, Rvs3)
			S032 (+ SCH)
			FCH Service Option Setup
	Background Active Cell Connected + Data Sys Type: IS-2000		
1 of 2	IntRef	Offset	1 of 3

Mobile Station Information
 ESN (Hex): 0x6C3203AE
 ESN (Dec): 108-03330990
 MCC:
 MNC:
 NSIN: 3163712588
 Slot Class: Slotted
 Slot Cycle Index: 2
 Protocol Revision: 6 (IS-2000_Rev0)
 Band Class: US Cell US PCS
 NS Operating
 Max EIRP (dB (Fud1, Rvs1) 7
 Registration (Fud2, Rvs2)
 QPCH Support (Fud3, Rvs3)
 Enhanced RC (Fud4, Rvs3)
 Min Power Co (Fud5, Rvs4)
 NS Called Pa

Test Mode 3 in Radio Configuration 3 (Service Option32)

Call Setup Screen			
Call Control	Active Cell Operating Mode		Call Params
Operating Mode			Cell Power
Active Cell			-60.00
			dBm/1.23 MHz
			Cell Band
			US PCS
			Channel
Start Data Connection			675
			Application Config
Close Session			FTAP Rate
			307.2 kbps
Handoff Setup			(2 Slot, QPSK)
AT Max Power			RTAP Rate
23 dBm/1.23 MHz			153.6 kbps
	Background Active Cell Session Open Sys Type: IS-856		
			Logging: No Conn.
1 of 3	IntRef	Offset	RTAP 1 of 3

Access Terminal Information (AT Reported)
 Session Seed: 0x7722375A
 Hardware ID Type (Hex): 0x010000 ESN
 Hardware ID (Hex): 0x6020699F
 Hardware ID (Decimal): 096-02976159
Access Terminal Information (AN Assigned)
 UATI 024: 2
 UATI Color Code: 64
 MAC Index: 5
Access Terminal Information (User Entered)
 AT Max Power: 23 dBm/1.23 MHz
Application Configuration
 Session Application Type: Test Application
 Test Application Protocol: RTAP
 Limited TAP: Off
 AT Directed Packets: 50 %
 ACK Channel Bit Fixed Mode Attribute: On

1xEV-DO setting with RTAP 153.6kbps



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