



Appendix D. – CDMA2000 1XEV-DO and 1XRTT Test Modes

Test Summary:

The EUT supports IS95 2G networks, CDMA 2000 1xRTT, and 1xEVDO Rev. 0 for Cellular band and PCS band. The maximum output power is chosen for EMC and SAR testing for worst case scenario. A full EMC measurement in this report is done in CDMA2000 1xRTT mode with FCH RC1 and 1xEV-DO mode with the uplink data rate 153.6kbps for Cellular band, and CDMA2000 1x RTT mode with FCH RC1 and 1XEV-DO mode with the uplink data rate 153.6kbps for PCS band.

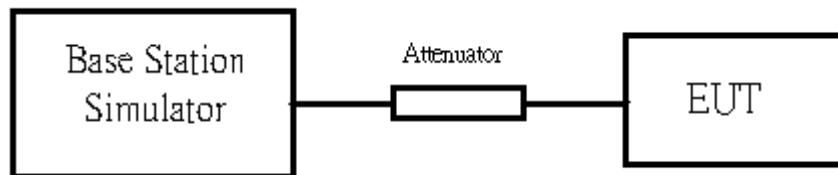
Based on all the uplink channels using the same modulation type, BPSK, and those maximum output power are very closer, above test modes could reflect compliance under all operational modes.

Maximum output power list:

Bands	Test Mode	Test Status	Modulation Type	Channel	Frequency (MHz)	Conducted Power (dBm)
CDMA2000 Cellular 850	1xRTT	FCH _RC1	BPSK	1013	824.70 (Low)	24.08
			BPSK	384	836.52 (Mid)	24.09
			BPSK	777	848.31 (High)	24.18
		FCH_RC3	BPSK	1013	824.70 (Low)	23.99
			BPSK	384	836.52 (Mid)	24.11
			BPSK	777	848.31 (High)	24.13
		FCH+SCH_RC3	BPSK	1013	824.70 (Low)	23.97
			BPSK	384	836.52 (Mid)	24.12
			BPSK	777	848.31 (High)	24.10
		EVDO-UL: 9.6Kbps	BPSK	1013	824.70 (Low)	24.08
			BPSK	384	836.52 (Mid)	24.31
			BPSK	777	848.31 (High)	24.28
		EVDO-UL: 38.4Kbps	BPSK	1013	824.70 (Low)	24.11
			BPSK	384	836.52 (Mid)	24.30
			BPSK	777	848.31 (High)	24.26
		EVDO-UL: 153.6Kbps	BPSK	1013	824.70 (Low)	24.09
			BPSK	384	836.52 (Mid)	24.31
			BPSK	777	848.31 (High)	24.24



Bands	Test Mode	Test Status	Modulation Type	Channel	Frequency (MHz)	Conducted Power (dBm)
CDMA2000 PCS 1900	1xRTT	FCH_RC1	BPSK	25	1851.25 (Low)	23.51
			BPSK	600	1880.00 (Mid)	23.44
			BPSK	1177	1908.75 (High)	23.57
		FCH_RC3	BPSK	25	1851.25 (Low)	23.42
			BPSK	600	1880.00 (Mid)	23.36
			BPSK	1177	1908.75 (High)	23.51
	1xEV-DO	FCH+SCH_RC1	BPSK	25	1851.25 (Low)	23.45
			BPSK	600	1880.00 (Mid)	23.40
			BPSK	1177	1908.75 (High)	23.50
		EVDO-UL: 9.6Kbps	BPSK	25	1851.25 (Low)	23.36
			BPSK	600	1880.00 (Mid)	23.40
			BPSK	1177	1908.75 (High)	23.49
		EVDO-UL: 38.4Kbps	BPSK	25	1851.25 (Low)	23.34
			BPSK	600	1880.00 (Mid)	23.42
			BPSK	1177	1908.75 (High)	23.51
		EVDO-UL: 153.6Kbps	BPSK	25	1851.25 (Low)	23.37
			BPSK	600	1880.00 (Mid)	23.39
			BPSK	1177	1908.75 (High)	23.51

**Setup Configuration**

1. The EUT was connected to Base Station, Agilent 8960.
Refer to the drawing of Setup Configuration.
2. The RF path losses was compensated into the measurements.
3. A call was established between EUT and Base Station for each modes with following settings:
 - a. Set the Power control All Up for FCH_RC3 and FCH_RC1 with Service Option 55.
 - b. Set the Power control All Up for FCH+SCH with Service Option 32.
 - c. Set the Power control All Up for different rates on CDMA2000 1XEV-DO.
4. The transmitted maximum output power was recorded.

Test Mode 1 in Radio Configuration 1 (FCH_RC1)

Call Setup Screen			
Call Control	Active Cell Operating Mode		CallParms
	Mobile Station Information		Cell Power -86.00 dBm/1.23 MHz
	ESN (Hex): 0x6C32D3AE ESN (Dec): 108-03330990 MCC: MNC: MSIN: 3163712588 Slot Class: Slotted Slot Cycle Index: 2		Cell Band US PCS
	FCH Service Option Setup		Channel 1175
	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)		Protocol Rev 6 (IS-2000)
			Radio Config (Fud1, Rvs1) S055 (Loopback)
			FCH Service Option Setup ▾
Close Menu	Background	Active Cell Idle	Sys Type: IS-2000
		IntRef	Offset
			1 of 3

Test Mode 1 in Radio Configuration 1 (FCH_RC1)



Test Mode 3 in Radio Configuration 3 (FCH+SCH)

Call Setup Screen			
Call Control	Active Cell Operating Mode		Call Params
	Mobile Station Information		
	ESN (Hex):	0x6C32D3AE	
	ESN (Dec):	108-03330990	
	IMSI:	3163712588	
	Slot Class:	Slotted	
	Slot Cycle Index:	2	
	Protocol Revision:	6 (IS-2000_Rev0)	
	Band Class:	IS-2000	
	IS Operating	Radio Config	
Max EIRP (dBm)	(Fud1, Rus1)	7	
Registration	(Fud2, Rus2)		
QPSK Support	(Fud3, Rus3)		
Enhanced RC	(Fud4, Rus3)		
Min Power Control	(Fud5, Rus4)		
IS Called Party			
Background	Active Cell	Sys Type: IS-2000	
	Connected + Data		
1 of 2	IntRef	Offset	1 of 3

Test Mode 3 in Radio Configuration 3 (Service Option32)

Call Setup Screen				
Call Control	Active Cell Operating Mode		Call Params	
	Access Terminal Information (AT Reported)			
	Session Seed:	0x7722375A		
	Hardware ID Type (Hex):	0x010000 ESN		
	Hardware ID (Hex):	0x602D699F		
	Hardware ID (Decimal):	096-02976159		
	Access Terminal Information (AH Assigned)			
	UATI 024:	2		
	UATI Color Code:	64		
	HAC 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 Node Attribute: On				
Background	Active Cell	Sys Type: IS-856		
	Session Open	Logging: No Conn.		
1 of 3	IntRef	Offset	RTAP	1 of 3

1XEVDO 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