Appendix D. – CDMA2000 1xRTT and 1xEV-DO Test Modes

Test Summary:

The EUT supports IS95 2G networks, CDMA2000 1xRTT, 1xEVDO Rev.0 and 1xEVDO Rev.A 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 RC3 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 9.6kbps for PCS band.

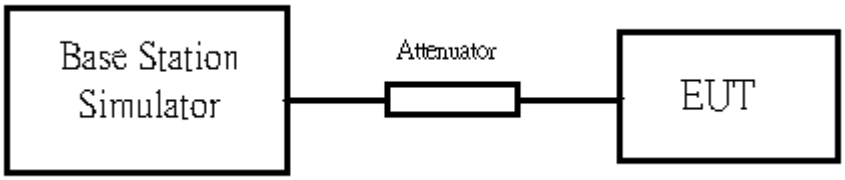
Based on all the uplink channels using the same modulation type, BPSK, and those maximum output power are very closer, above test modes could reflect compliance under all operational modes.

Maximum output power list:

Bands	Test Mode	Test Status	Channel	Frequency (MHz)	Conducted Power (dBm)	Conducted Power (Watts)
CDMA2000 Cellular	1xRTT	FCH _RC1	1013	824.70 (Low)	24.83	0.30
			384	836.52 (Mid)	24.47	0.28
			777	848.31 (High)	24.72	0.30
		FCH_RC3	1013	824.70 (Low)	24.85	0.31
			384	836.52 (Mid)	24.33	0.27
			777	848.31 (High)	24.74	0.30
		FCH+SCH_RC3	1013	824.70 (Low)	24.84	0.30
			384	836.52 (Mid)	24.27	0.27
			777	848.31 (High)	24.73	0.30
	1xEV-DO Rev0 RTAP	EVDO-UL: 9.6Kbps	1013	824.70 (Low)	23.94	0.25
			384	836.52 (Mid)	23.95	0.25
			777	848.31 (High)	23.75	0.24
		EVDO-UL: 38.4Kbps	1013	824.70 (Low)	23.99	0.25
			384	836.52 (Mid)	23.98	0.25
			777	848.31 (High)	23.86	0.24
		EVDO-UL: 53.6Kbps	1013	824.70 (Low)	24.06	0.25
			384	836.52 (Mid)	24.04	0.25
			777	848.31 (High)	23.97	0.25
	1xEV-DO RevA RETAP	128Kbps	1013	824.70 (Low)	23.90	0.25
			384	836.52 (Mid)	23.90	0.25
			777	848.31 (High)	23.68	0.23
		2048Kbps	1013	824.70 (Low)	23.92	0.25
			384	836.52 (Mid)	23.88	0.24
			777	848.31 (High)	23.80	0.24
		12288Kbps	1013	824.70 (Low)	23.82	0.24
			384	836.52 (Mid)	23.84	0.24
			777	848.31 (High)	23.66	0.23

Bands	Test Mode	Test Status	Channel	Frequency (MHz)	Conducted Power (dBm)	Conducted Power (Watts)
CDMA2000 PCS	1xRTT	FCH_RC1	25	1851.25 (Low)	25.48	0.35
			600	1880.00 (Mid)	24.80	0.30
			1177	1908.75 (High)	24.62	0.29
		FCH_RC3	25	1851.25 (Low)	25.34	0.34
			600	1880.00 (Mid)	24.76	0.30
			1177	1908.75 (High)	24.54	0.28
		FCH+SCH_RC1	25	1851.25 (Low)	25.46	0.35
			600	1880.00 (Mid)	24.85	0.31
			1177	1908.75 (High)	24.66	0.29
	1xEV-DO Rev0 RTAP	EVDO-UL: 9.6Kbps	25	1851.25 (Low)	24.73	0.30
			600	1880.00 (Mid)	24.10	0.26
			1177	1908.75 (High)	23.53	0.23
		EVDO-UL: 38.4Kbps	25	1851.25 (Low)	24.60	0.29
			600	1880.00 (Mid)	24.03	0.25
			1177	1908.75 (High)	23.67	0.23
		EVDO-UL: 53.6Kbps	25	1851.25 (Low)	24.61	0.29
			600	1880.00 (Mid)	24.16	0.26
			1177	1908.75 (High)	23.84	0.24
	1xEV-DO RevA RETAP	128Kbps	25	1851.25 (Low)	24.15	0.26
			600	1880.00 (Mid)	23.48	0.22
			1177	1908.75 (High)	22.94	0.20
		2048Kbps	25	1851.25 (Low)	23.94	0.25
			600	1880.00 (Mid)	23.52	0.22
			1177	1908.75 (High)	23.02	0.20
		12288Kbps	25	1851.25 (Low)	24.09	0.26
			600	1880.00 (Mid)	23.47	0.22
			1177	1908.75 (High)	22.86	0.19

Setup Configuration:

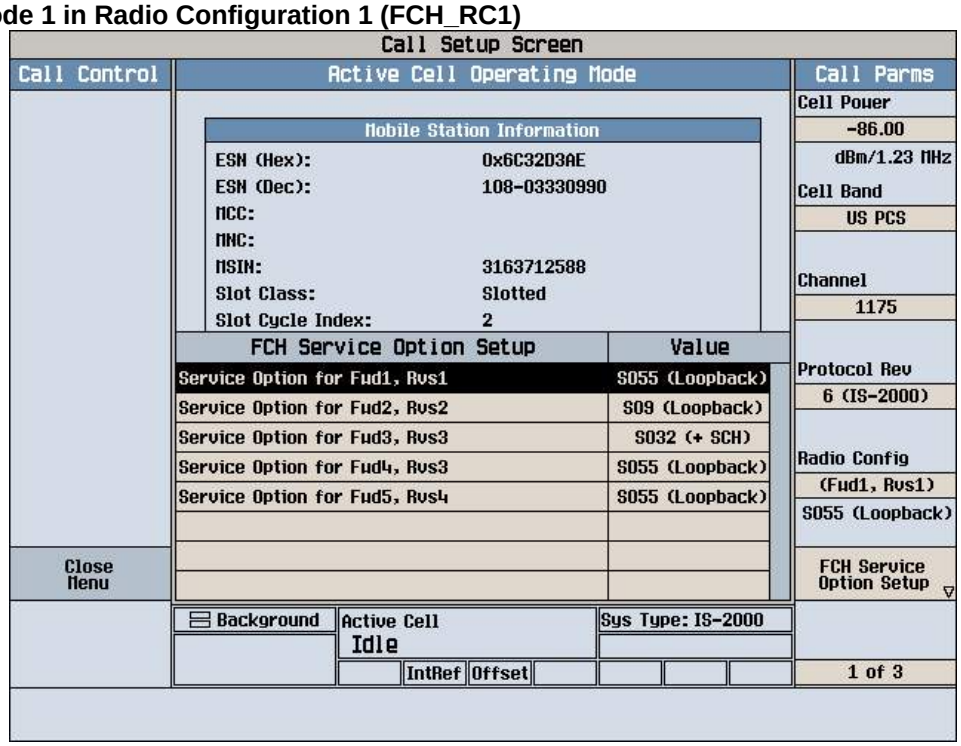


1. The EUT was connected to Base Station, Agilent 8960.

   Refer to the drawing of Setup Configuration.

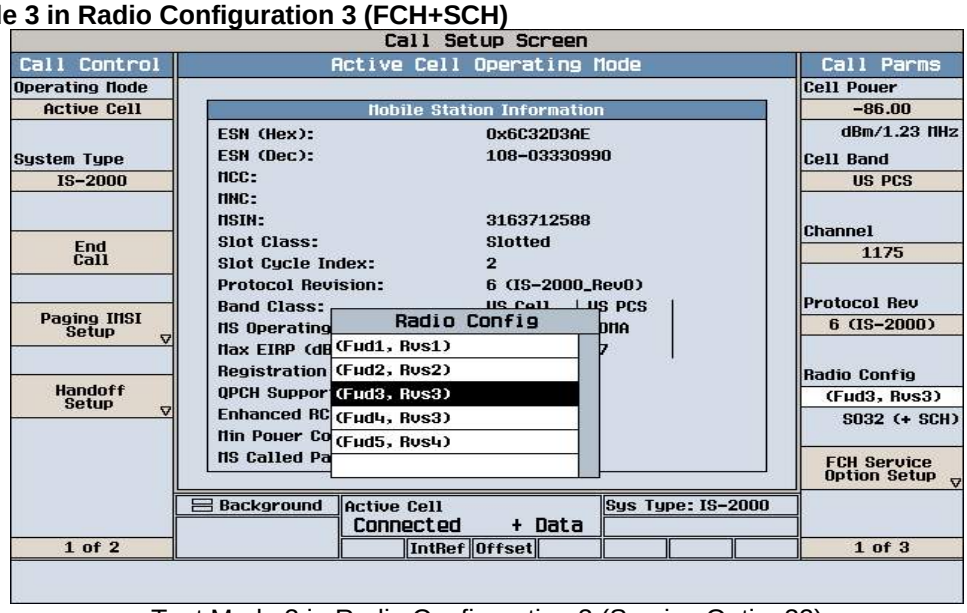
2. The RF path losses were compensated into the measurements.
3. A call was established between EUT and Base Station for each modes with following settings:
   a. Set the Power control All Up for FCH_RC3 and FCH_RC1 with Service Option 55.
   b. Set the Power control All Up for FCH+SCH with Service Option 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)

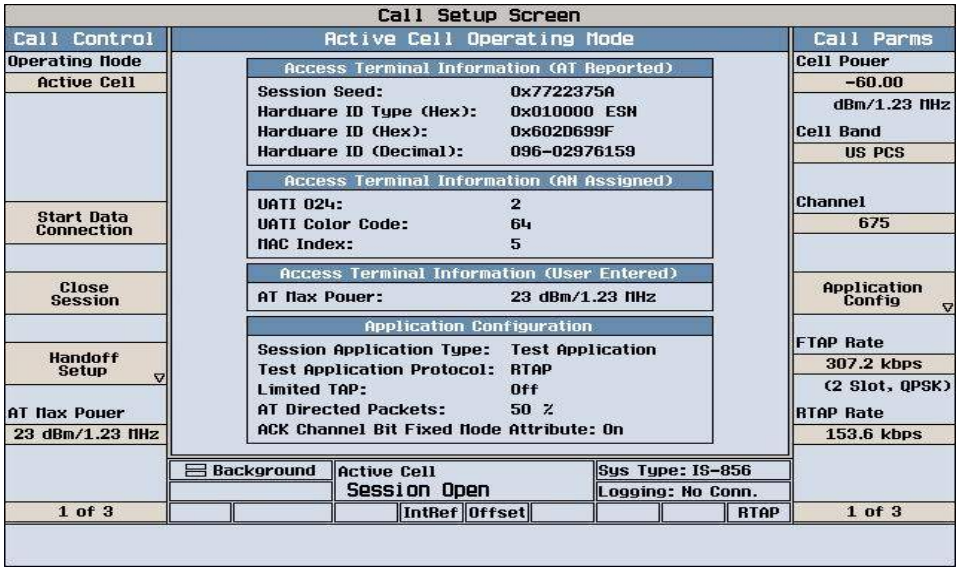


Test Mode 1 in Radio Configuration 1 (FCH_RC1)

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



Test Mode 3 in Radio Configuration 3 (Service Option32)



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