EXHIBIT 10: TEST REPORT

SYNOPSIS

The test report attached to this exhibit demonstrates that the Lucent Technologies' Cellular Frequency UMTS-CDMA "Multi-Carrier CDMA Radio" (MCR850), Model BNJ65, which is designed to operate in the Lucent UMTS Flexent® OneBTS™ MCPA (External Multi-Carrier Power Amplifier) Wireless Base Station, is in full compliance with all requirements of the Rules of the Commission as specified in the Code of Federal Regulations (CFR), Title 47 – Telecommunication; Part 22, Subpart H – Cellular Radiotelephone Service; Section 22.917 - Emission Limitations for Cellular; effective October 1, 2004. All testing was performed in accordance with CFR 47, Part 2, Subpart J – Equipment Authorization Procedures; effective October 1, 2004. It also demonstrates compliance with the spurious emissions limitations specified in ETSI TS 125 141 V5.9.0 (2004-09): Universal Mobile Telecommunications System (UMTS); Base Station Conformance Testing (FDD), (3GPP TS 25.141, Version 5.9.0, Release 5), which is the standard used as a guideline in the design of the MCR850 transceiver. The objective of this application is to obtain FCC Class II Permissive Change Authorization, under FCC ID: AS5ONEBTS-08, for operation in the Universal Mobile Telecommunications System (UMTS) with a single 5 MHz emission bandwidth carrier (4M10F9W) set to a maximum power level at the frame transmit terminal of 3.3 Milliwatts (3-second), over the entire Cellular Frequency spectrum 869-894 MHz. The MCR850 was initially filed under AS5ONEBTS-08 for CDMA operation. The purpose of this Class II Change is to add the UMTS emission designator, 4M10F9W, to the initial filing.

The UMTS850 UMTS-CDMA MCPA consists of the principle RF components: (1) Crystal Reference Oscillator Module (OMA) at 15 MHz, and (2) UMTS-CDMA "Multi-Carrier CDMA Radio" (MCR850), Model BNJ65, which was previously authorized by the Federal Communications Commission under FCC ID: AS5ONEBTS-08, covering the cellular frequency spectrum: A thru B 869-894 MHz. The MCPA is configured for 3S1C operation with the output of the MCR850 radio connected to the frame transmit terminal; the maximum single carrier power level is rated at 3.3 mW (+5.2 dBm). The most complex modulation scheme was evaluated: ETSI TS 25.141 Rel 5, Test Model 5 (TM5) = VOICE [with QPSK modulation and 20 active channels] + High Speed Downlink Packet Access (HSDPA) [with 16QAM modulation and 4 active channels]. This provides a total of 24 active channels within the 5 MHz emission bandwidth.

All conducted RF characteristics and emissions measurements were performed at the MCPA frame transmit terminal, using a production MCPA equipment frame. All testing was performed in the Lucent Technologies, Whippany, NJ, compliance laboratory by F. E. Chetwynd and M. P. Farina during the period October 4 – 17, 2005; in adherence to a test plan generated by M. P. Farina, in accordance with Lucent's ISO/TL9000 Registration. All measurement instrumentation utilized were also calibrated in compliance with Lucent's ISO/TL9000 Registration. The Whippany 3 & 10 Meter Open Area Test Site (OATS) is authorized by the Federal Communications Commission (FCC) under Registration Number: 90770, in compliance with the requirements of Section 2.948 of the Rules of the Commission.

Frequency stability measurements were previously performed by M. Coelho, Lucent Technologies, Swindon, United Kingdom, under the direction of M. P. Farina, and in adherence to the previously cited ISO/TL9000 test plan. This test program was conducted during the approximate interval October 10 – 14, 2005.

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Subject: **Application for FCC Intial Authorization, under FCC ID: AS5ONEBTS-10, Covering a Broadband PCS UMTS-CDMA Transceiver System (1900), Operating Over the Spectrum 1930-1990 MHz with a 5 MHz Carrier Emission Bandwidth.**

October 19, 2005

TEST REPORT

INTRODUCTION:

The exhibits presented in this test report demonstrate that the Lucent Technologies' Cellular Frequency UMTS-CDMA "Multi-Carrier CDMA Radio" (MCR850), Model BNJ65, which is designed to operate in the Lucent UMTS Flexent® OneBTS™ "External Multi-Carrier Power Amplifier" (MCPA) Wireless Base Station, is in full compliance with all requirements of the Rules of the Commission as specified in the Code of Federal Regulations (CFR), Title 47 – Telecommunication; Part 22, Subpart H – Cellular Radiotelephone Service; Section 22.917 - Emission Limitations for Cellular; effective October 1, 2004. All testing was performed in accordance with CFR 47, Part 2, Subpart J – Equipment Authorization Procedures; effective October 1, 2004. It also demonstrates compliance with the spurious emissions limitations specified in ETSI TS 125 141 V5.9.0 (2004-09): Universal Mobile Telecommunications System (UMTS); Base Station Conformance Testing (FDD), (3GPP TS 25.141, Version 5.9.0, Release 5). This standard was the guideline used in the design of the MCR850 transceiver. The objective of this application is to obtain FCC Class II Permissive Change Authorization, under FCC ID: AS5ONEBTS-08, for operation in the Universal Mobile Telecommunications System (UMTS) with a single 5 MHz emission bandwidth carrier and adding the emission designator 4M10F9W to the initial filing. The maximum rated power level at the MCPA frame transmit terminal is 3.3 Milliwatts (3-second), over the Cellular Frequency spectrum 869 – 894 MHz. The most complex modulation scheme was evaluated: ETSI TS 25.141 Rel 5, Test Model 5 (TM5) = VOICE [with QPSK modulation and 20 active channels] + High Speed Downlink Packet Access (HSDPA) [with 16QAM modulation and 4 active channels]. This provides a total of 24 active channels within the 5 MHz emission bandwidth.

The UMTS850 MCPA Macrocell consists of the principle RF components: (1) Crystal Reference Oscillator Module (OMA) at 15 MHz, and (2) UMTS-CDMA "Multi-Carrier CDMA Radio" (MCR850), Model BNJ65, which was previously authorized by the Federal Communications Commission under FCC ID: AS5ONEBTS-08, covering the cellular frequency spectrum: 869 – 894 MHz.

All conducted RF characteristics and emissions measurements were performed at the transmit antenna terminal, using a production MCPA equipment frame. All testing was performed in the Lucent Technologies, Whippany, NJ, compliance laboratory by F. E. Chetwynd and M. P. Farina during the period October 4 – 17, 2005; in adherence to a test plan generated by M. P. Farina, in accordance with Lucent's ISO/TL9000 Registration. All measurement instrumentation utilized were also calibrated in compliance with Lucent's ISO/TL9000 Registration. The Whippany 3 & 10 Meter Open Area Test Site (OATS) is authorized by the Federal Communications Commission (FCC) under Registration Number: 90770, in compliance with the requirements of Section 2.948 of the Rules of the Commission.

Frequency stability measurements were previously performed by M. Coelho, Lucent Technologies, Swindon, United Kingdom, under the direction of M. P. Farina, and in adherence to the previously cited ISO/TL9000 test plan. This test program was conducted during the approximate interval October 10 – 14, 2005.

This report fully documents all required tests and the test results, sufficient to show full compliance with the Rules of the Commission.

APPLICABLE FCC RULES AND INDUSTRY STANDARDS:

The exhibits presented in this test report demonstrate that the Lucent Technologies' Cellular Frequency UMTS-CDMA "Multi-Carrie CDMA Radio" (MCR850), Model BNJ65, which is designed to operate in the Lucent UMTS Flexent® OneBTS™ "External Multi-Carrier Power Amplifier" (MCPA) Wireless Base Station, is in full compliance with all requirements of the Rules of the Commission as specified in the Code of Federal Regulations (CFR), Title 47 – Telecommunication; Part 22, Subpart H – Cellular Radiotelephone Service; Section 22.917 - Emission Limitations for Cellular; effective October 1, 2004. All testing was performed in accordance with CFR 47, Part 2, Subpart J – Equipment Authorization Procedures; effective October 1, 2004. It also demonstrates compliance with the spurious emissions limitations specified in ETSI TS 125 141 V5.9.0 (2004-09): Universal Mobile Telecommunications System (UMTS); Base Station Conformance Testing (FDD), (3GPP TS 25.141, Version 5.9.0, Release 5). The specific test procedures that are both required for and are applicable to the UMTS850 and MCR850 transceiver are:

Part 2.1046	RF Power Output	**Pages 4 – 5**
Part 2.1047	Modulation Characteristics	**Pages 6 – 9**
Part 2.1049	Occupied Bandwidth	**Pages 10-19**
Part 2.1051	Spurious Emissions at the Antenna Terminals.	**Pages 20 – 26**
Part 2.1053	Field Strength of Spurious Radiation	**Pages 27**
Part 2.1055	Frequency Stability	**Pages 28 – 40**
Part 2.1057	Frequency Spectrum to be Investigated	
Part 22	Public Mobile Services; Subpart H – Cellular Radiotelephone Service	
Part 22.917	Emission Limitations for Cellular	

ETSI TS 125 141 V5.9.0 (2004-09): Universal Mobile Telecommunications System (UMTS); Base Station Conformance Testing (FDD), (3GPP TS 25.141, Version 5.9.0, Release 5).

ANSI C63.4-2003 American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic in the Range of 9 kHz to 40 GHz; January 30, 2004

PART 2.1046 MEASUREMENTS REQUIRED: RF POWER OUTPUT

The Cellular Frequency UMTS-CDMA "Multi-Carrier CDMA Radio" (MCR850), Model BNJ65, transceiver, subject of this application for Class II Permissive Change Authorization, is designed to provide a maximum RF power level, per single 5 MHz emission bandwidth carrier, of 3.3 Milliwatts (+5.2 dBm) at the MCPA equipment frame transmit terminal. This System is designed to operate in the cellualr frequency spectrum: 869 – 894 MHz. The MCPA does not contain power amplifiers and bandpass transmit filters; it is designed to interface with the customer's external and pre-existing power amplifiers and transmit filters.

All conducted emission measurements are performed at the frame transmit terminal. Five 5 MHz UMTS carrier channels were used throughout this test procedure, as tabulated below, to represent the lowest and the highest settable channels in the Cellular Frequency Spectrum, and the approximate band center frequency. Each time the carrier was set to each of the channels, the power level is adjusted, by software control, to + 5.0 – 5.2 dBm (nominally 3.3 milliWatt 3-second average) before performing each emission measurement. The carrier modulation was set to the most complex modulation scheme: ETSI TS 25.141 Rel 5, Test Model 5 (TM5) = VOICE [with QPSK modulation and 20 active channels] + High Speed Downlink Packet Access (HSDPA) [with 16QAM modulation and 4 active channels]. This provides a total of 24 active channels within the 5 MHz emission bandwidth.

Cellular Frequency Band	UMTS850 Carrier	Single Carrier Bandwidth	UARFCN Channel Number	UMTS Carrier Center Frequency	Measured Power Level
A	Lowest Settable for A-Band and to 869 MHz Band Edge	5 MHz	1007	871.5 MHz	+5 dBm
A	Highest Settable for A-Band	5 MHz	1037	877.5 MHz	+5 dBm
B	Lowest Settable for B-Band	5 MHz	1062	882.5 MHz	+5 dBm
B	Highest Settable for B-Band	5 MHz	1087	877.5 MHz	+5 dBm
B'	Highest Settable to 894 MHz Band Edge	5 MHz	1107	891.5 MHz	+5 dBm

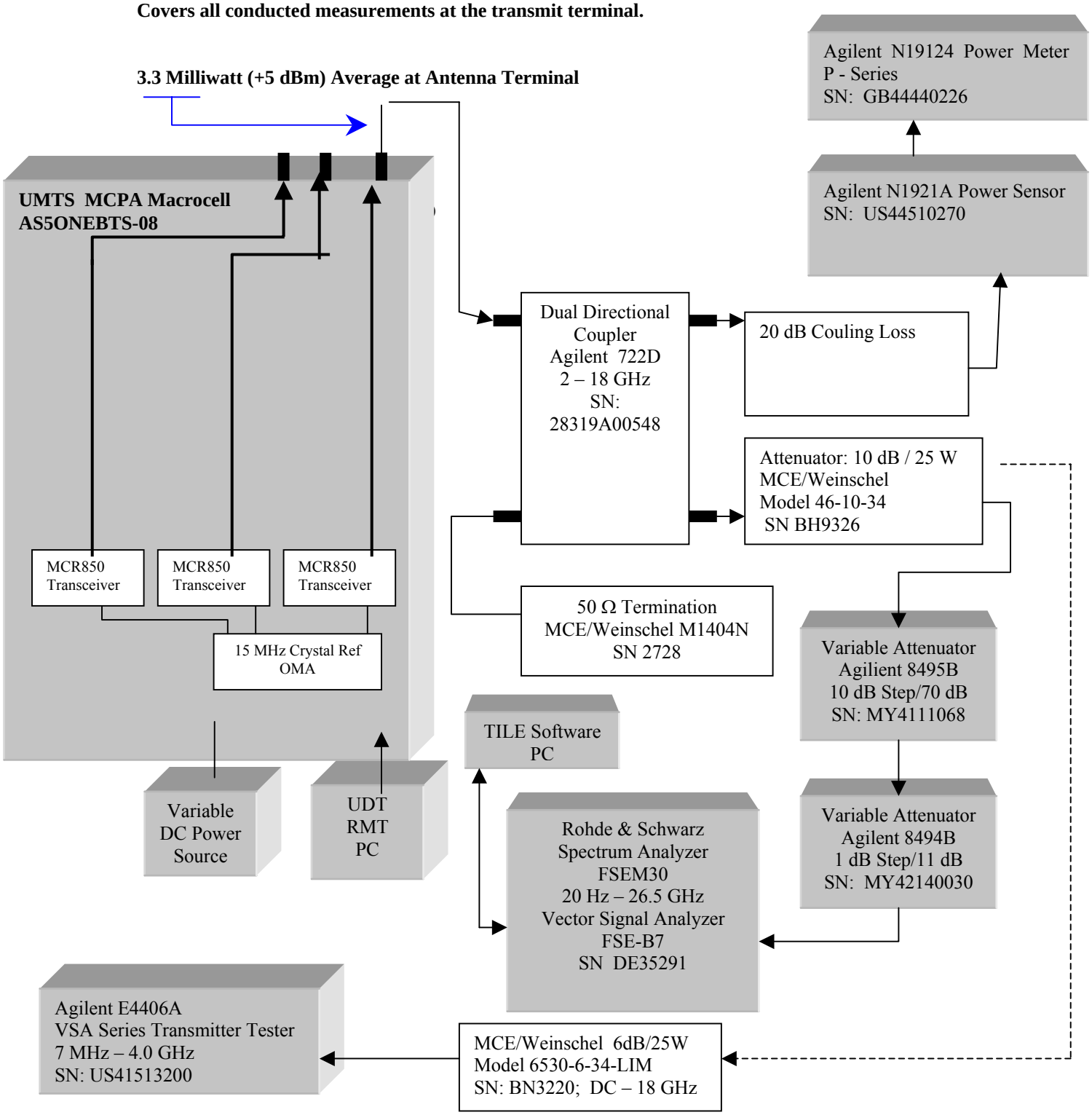
Note: UARFCN = UTRA Absolute Radio Frequency Channel Number

These five frequencies are used for all of the conducted emission tests that follow.

Results: The 5 MHz UMTS 850 Transceiver is compliant with the manufacturer's rated power level at the frame transmit terminal for the above listed carrier frequencies.

Block Diagram Of The Power Measurement Test Set-Up And Test Equipment Configuration for the Lucent UMTS Flexent® OneBTS™ MCPA850 Wireless Base Station
Covers all conducted measurements at the transmit terminal.

3.3 Milliwatt (+5 dBm) Average at Antenna Terminal



PART 2.1047 MEASUREMENTS REQUIRED: MODULATION CHARACTERISTICS

The modulation accuracy was measured at the MCPA Transmit Terminal for each of the five UMTS 850 carriers UARFCN 1007, 1037, 1062, 1087 & 1107. The power level was set 3.3 Milliwatts (+5 dBm) and the modulation set to provide a single active channel/code (SCH), as required for ETSI TS 25.141 Test Model 4 (TM4) modulation. The requirement is that the Error Vector Magnitude (EVM) be less than 17.5% rms. The test equipment used was an Agilent E4406A VSA Series Transmitter Tester (SN US41513200). In accordance with ETSI TS 25.141 Rel 5, this measurement with TM4 should be made with the power level set to Pmax – 18 dB = 5 dBm – 18 dB = nominally -13 dBm.

RMS Error Vector Magnitude (EVM) Measurement Summary at the Antenna Terminal:

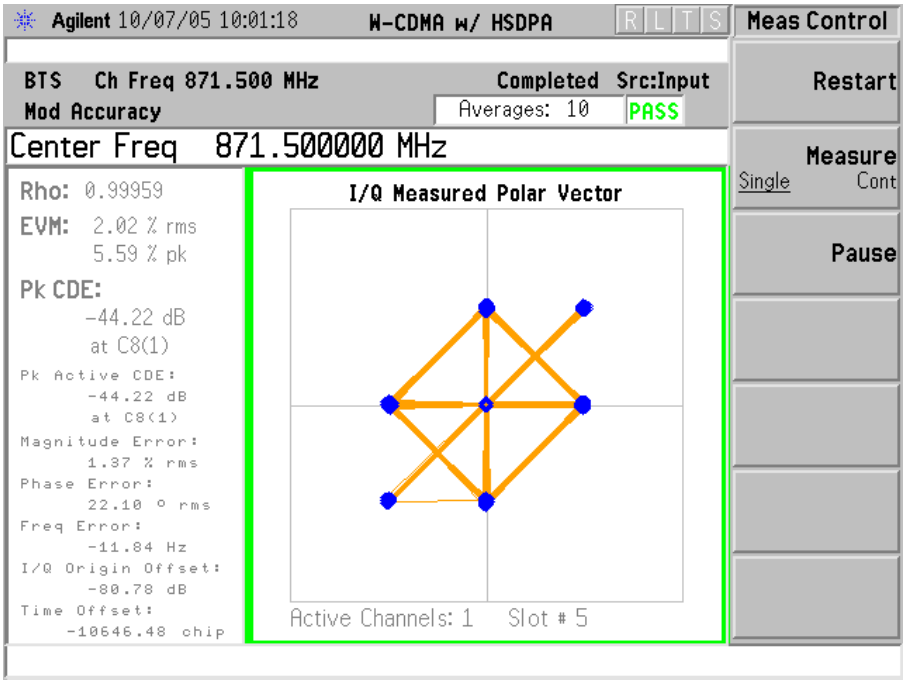
Cellular Frequency Band	UMTS850 Carrier	Single Carrier Bandwidth	UARFCN Channel Number	UMTS Carrier Center Frequency	Modulation Accuracy EVM
A	Lowest Settable for A-Band and to 869 MHz Band Edge	5 MHz	1007	871.5 MHz	**2.02 % rms**
A	Highest Settable for A-Band	5 MHz	1037	877.5 MHz	**2.00 % rms**
B	Lowest Settable for B-Band	5 MHz	1062	882.5 MHz	**2.08 % rms**
B	Highest Settable for B-Band	5 MHz	1087	877.5 MHz	**2.11 % rms**
B'	Highest Settable to 894 MHz Band Edge	5 MHz	1107	891.5 MHz	**1.82 % rms**

Minimum Standard Requirement: The minimum standard requirement is that the RMS Error Vector Magnitude (EVM) shall be less than 17.5%.

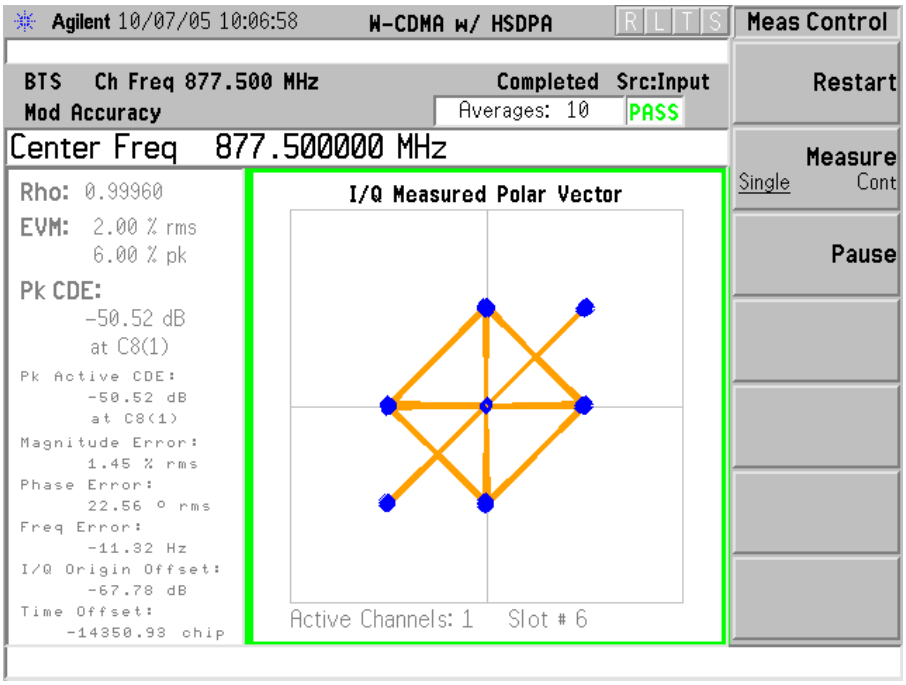
Test Set-up and Configuration: Same as previously used for Part 2.1046 RF Power Measurement, with exception that the FSEM30 Spectrum Analyzer is replaced by:
1) Agilent E4406A VSA Series Transmitter Tester, 7 MHz – 4.0 GHz, SN US41513200

RESULTS: The UMTS-CDMA "Multi-Carrier CDMA Radio" (MCR850), Model BNJ65, demonstrated full compliance with the modulation accuracy requirements specified in ETSI TS 25.141. All 5 channels were less than the 17.5% rms limitation. The plots for each channel are included in this exhibit as shown below.

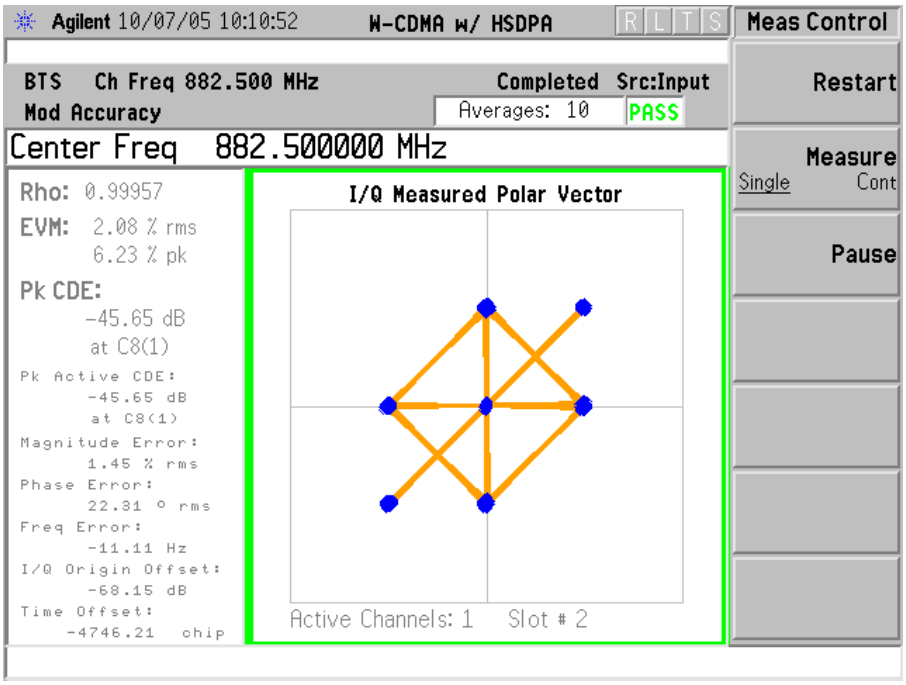
Modulation Characteristics: UARFCN Channel Number 1007 (871.5 MHz)
Tx Transmit Terminal at –14.98 dBm per single 5 MHz carrier



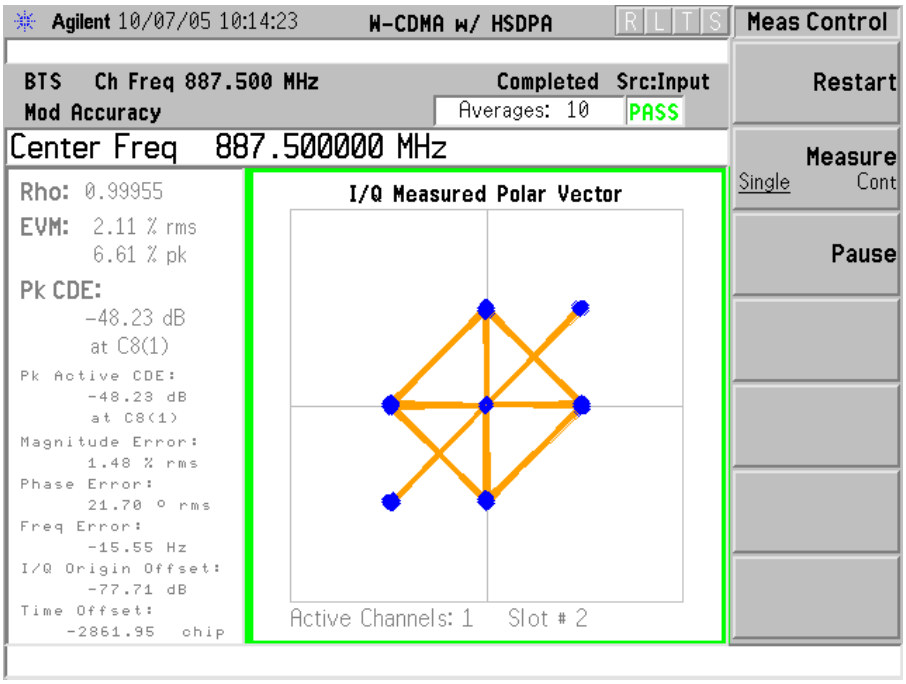
Modulation Characteristics: UARFCN Channel Number 1037 (877.5 MHz)
Tx Transmit Terminal at -15.30 dBm per single 5 MHz carrier



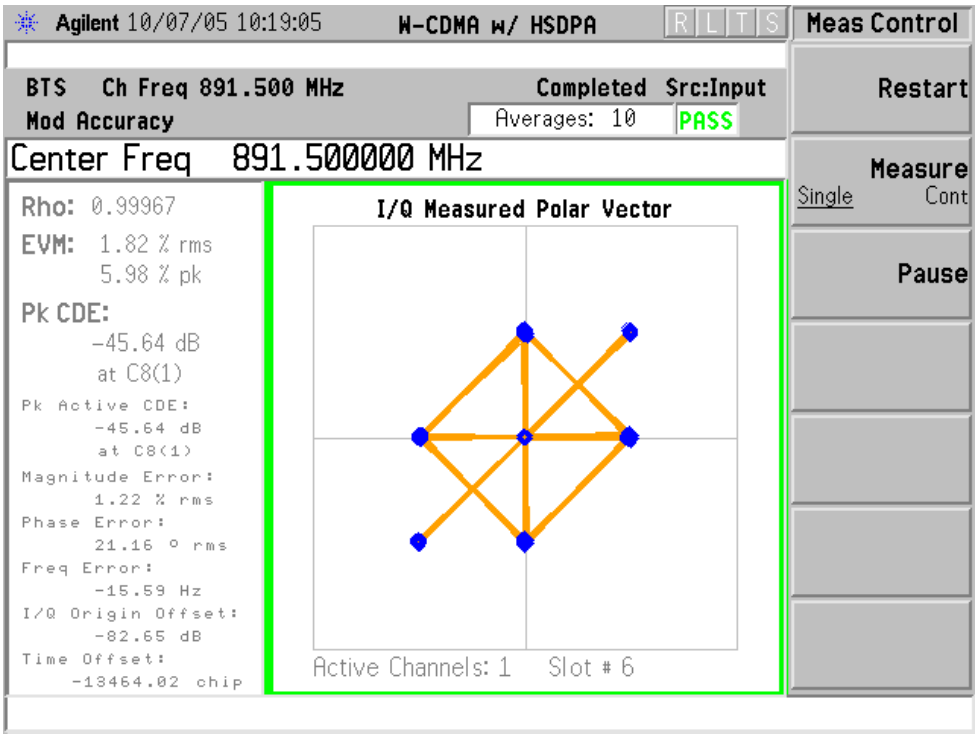
Modulation Characteristics: UARFCN Channel Number 1062 (882.5 MHz)
Tx Transmit Terminal at -15.16 dBm per single 5 MHz carrier



Modulation Characteristics: UARFCN Channel Number 1087 (887.5 MHz)
Tx Transmit Terminal at -15.27 dBm per single 5 MHz carrier



Modulation Characteristics: UARFCN Channel Number 1107 (891.5 MHz)
Tx Transmit Terminal at -15.13 dBm per single 5 MHz carrier



PART 2.1049 MEASUREMENTS REQUIRED: OCCUPIED BANDWIDTH

The occupied bandwidth was measured at the MCPA Transmit Terminal for each of the five, UMTS 850, 5 MHz carriers for the most complex modulation scheme: ETSI TS 25.141 Rel 5, Test Model 5 (TM5) = VOICE [with QPSK modulation and 20 active channels] + High Speed Downlink Packet Access (HSDPA) [with 16QAM modulation and 4 active channels]. This provides a total of 24 active channels within the 5 MHz emission bandwidth.

The power level was set to +5 dBm and the modulation set to 24 active channels for TM5 modulation.

The occupied bandwidth was measured by two methods:
1. The carrier 99% power bandwidth, which is also the necessary bandwidth, using an Agilent E4406A VSA Series Transmitter Tester (SN US41513200).
2. Emission mask limitation using a Rohde & Schwarz: Spectrum Analyzer FSEM30 (SN DE35291), to demonstrate compliance with the ETSI TS 25.141 emission mask requirements and with Part 22.917.

Method 1: The carrier 99% power bandwidth was measured at the MCPA Transmit Terminal with the 5 MHz carrier set to +5 dBm and modulated with the full 24 active channels for TM5. The measurement results show that the carrier is within the manufacturer's rated 5 MHz bandwidth for all nine carriers, as tabulated below. Measurements were performed for 5 carriers in one sector, of this 3S1C equipment frame configuration, for UMTS "Voice + HSDPA" TM5 modulation. The data is shown below.

Measured Carrier 99% Power Bandwidth: Voice + HSDPA

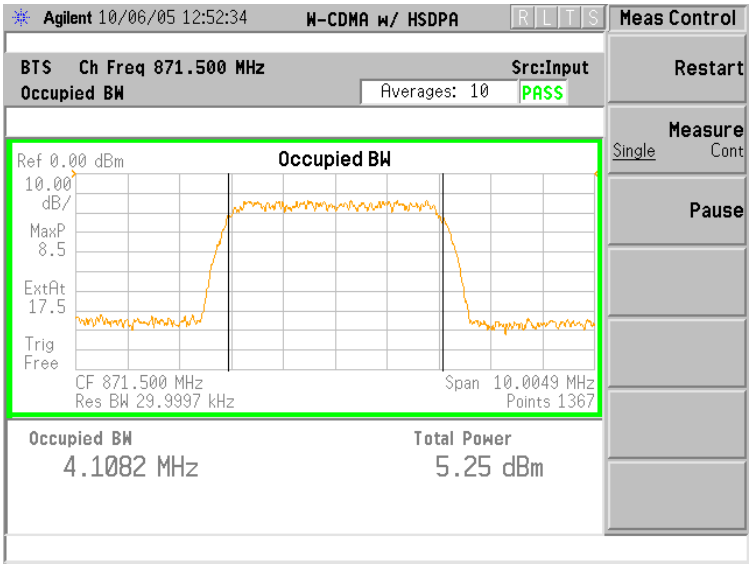
Cellular Frequency Band	UMTS850 Carrier	Single Carrier Bandwidth	UARFCN Channel Number	UMTS Carrier Center Frequency	Measured Carrier 99% Power Bandwidth
A	Lowest Settable for A-Band and to 869 MHz Band Edge	5 MHz	1007	871.5 MHz	**4.1082 MHz**
A	Highest Settable for A-Band	5 MHz	1037	877.5 MHz	**4.0939 MHz**
B	Lowest Settable for B-Band	5 MHz	1062	882.5 MHz	**4.1068 MHz**
B	Highest Settable for B-Band	5 MHz	1087	877.5 MHz	**4.1057 MHz**
B'	Highest Settable to 894 MHz Band Edge	5 MHz	1107	891.5 MHz	**4.1056 MHz**

Results: For each UMTS850 channel, the carrier does not exceed 5.0 MHz.
The average and range of 99% power bandwidths/necessary bandwidths are:

	UMTS + HSDPA
Average	**4.1040 MHz**
Max	**4.1068 MHz**
Min	**4.0939 MHz**

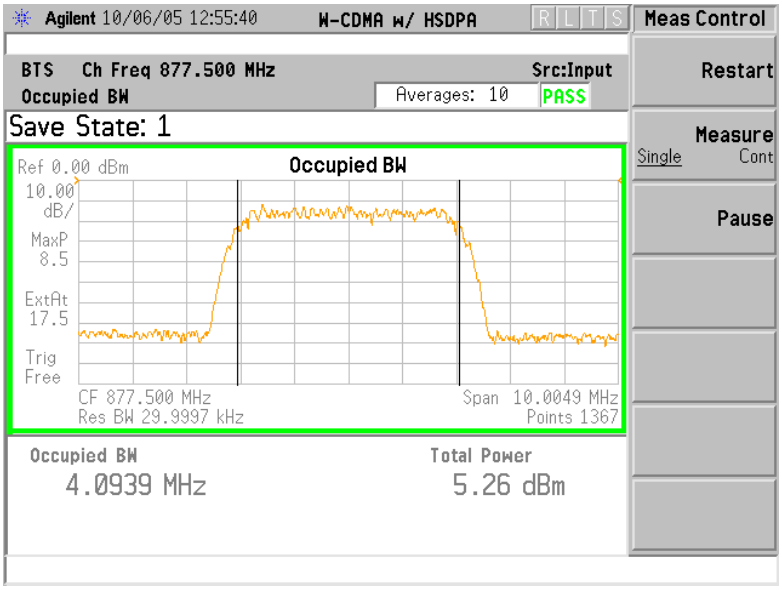
Carrier Bandwidth Characteristics: UARFCN Channel Number 1007 (8715 MHz)
Tx Transmit Terminal at +5 dBm dBm per single 5 MHz carrier

TM5 Modulation with 24 Active Channels



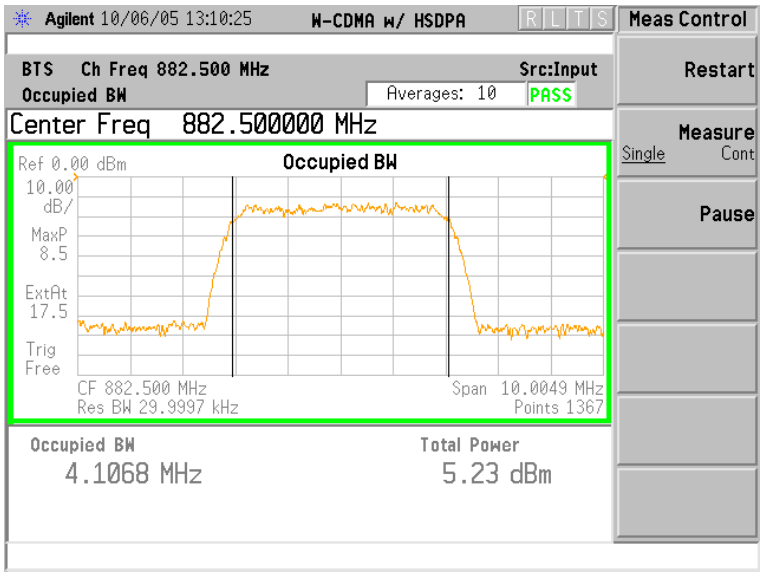
Carrier Bandwidth Characteristics: UARFCN Channel Number 1037 (8775 MHz)
Tx Transmit Terminal at +5 dBm dBm per single 5 MHz carrier

TM5 Modulation with 24 Active Channels



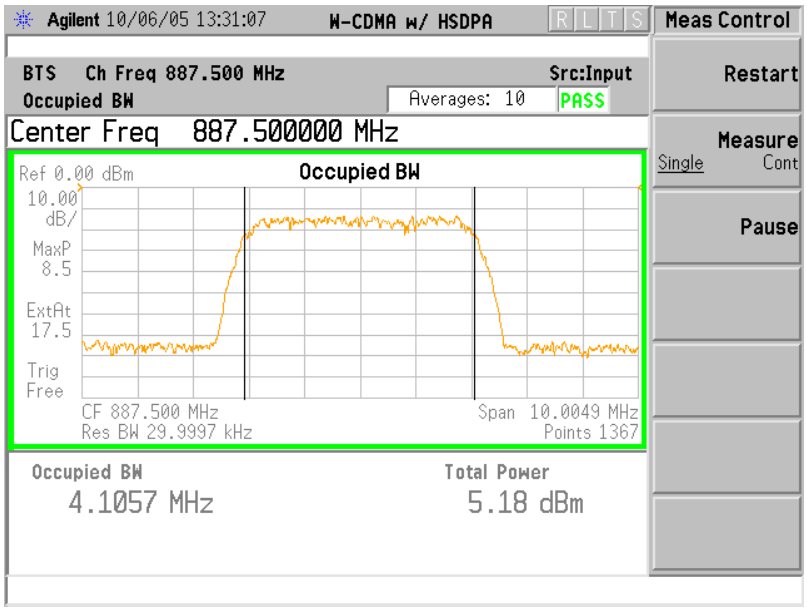
Carrier Bandwidth Characteristics: UARFCN Channel Number 1062 (882.5 MHz)
Tx Transmit Terminal at +5 dBm dBm per single 5 MHz carrier

TM5 Modulation with 24 Active Channels



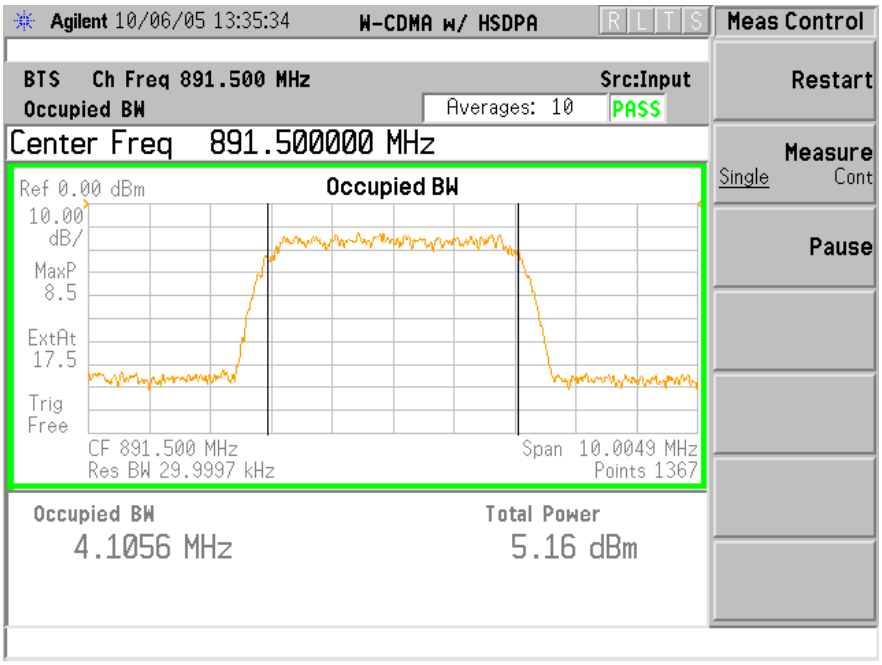
Carrier Bandwidth Characteristics: UARFCN Channel Number 1087 (887.5 MHz)
Tx Transmit Terminal at +5 dBm dBm per single 5 MHz carrier

TM5 Modulation with 24 Active Channels



Carrier Bandwidth Characteristics: UARFCN Channel Number 1107 (891..5 MHz)
Tx Transmit Terminal at +5 dBm dBm per single 5 MHz carrier

TM5 Modulation with 24 Active Channels



Method 2. Emission mask limitation using a Rohde & Schwarz: Spectrum Analyzer FSEM30 (SN DE35291) with Total Integrated Laboratory Environment (TILE) test software.

Measurement of the occupied bandwidth emission characteristics was performed at the MCPA Transmit Terminal with the 5 MHz carrier set to +5 dBm, and the modulation set to ETSI TS 25.141, Test Model 5 (TM5) for "Voice + HSDPA" with 24 active channels, for all nine carriers. In compliance with Part 22.917, the lowest and the highest settable channels in the cellular frequency band and in the A & B Sub-bands. The same 5 UARFCN channels used previously will be repeated. The emission mask used to demonstrate compliance was as specified in ETSI TS 25.141 for P < 31 dBm. The mask attenuation values were based on a 30 kHz resolution bandwidth, which made the modulated 5 MHz carrier to be offset from +5 dBm by –22.2 dB, in accordance with the equation:

Carrier Offset = 10 log (30 kHz/5 MHz) = -22.2 dB

This series of measurements were performed using the EMC software:

Total Integrated Laboratory Environment (TILE)
By Quantum Change/EMC Systems, Inc.

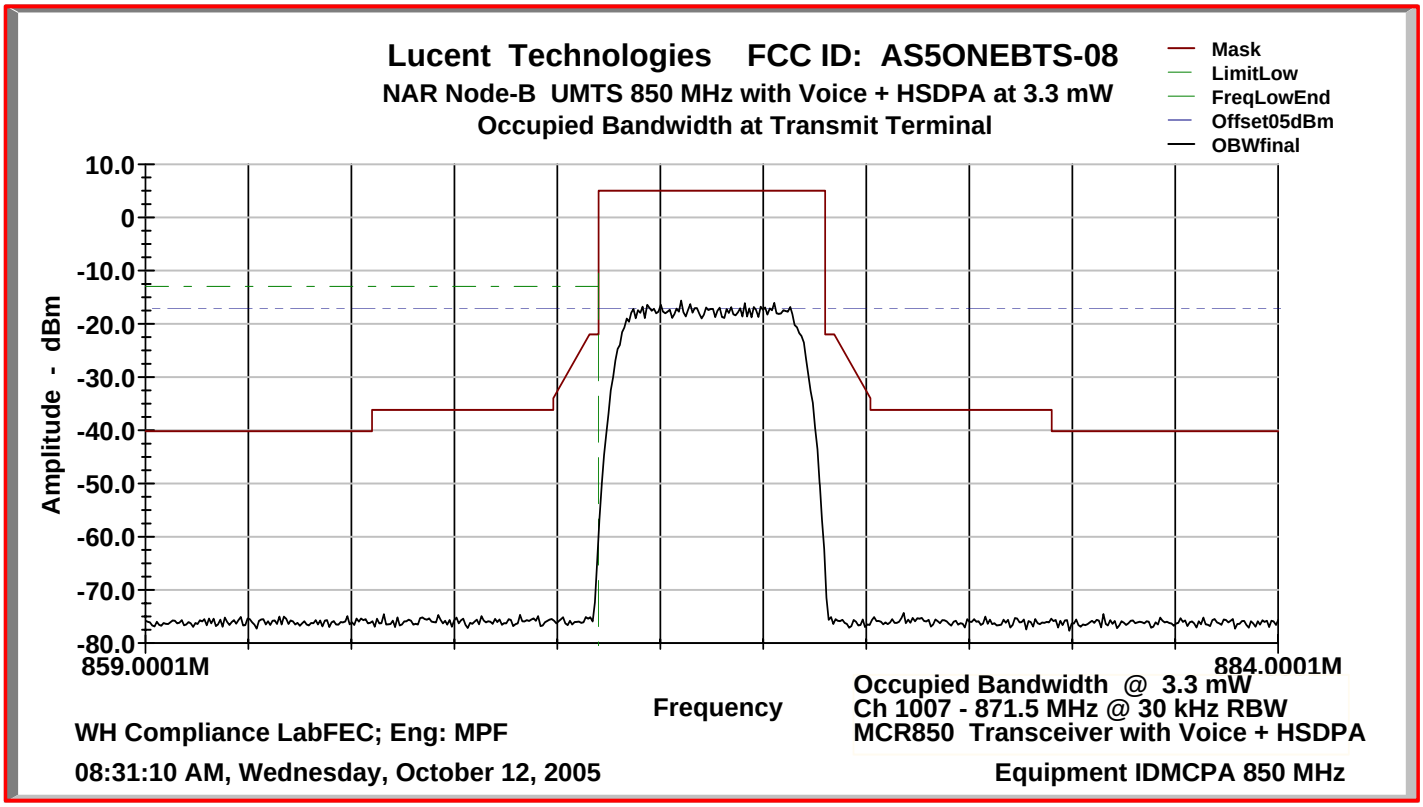
The data/measurement plots for the five channels, covering HSDPA at 24 active channels, are attached below.

Test Set-up and Configuration: Same as previously used for Part 2.1046 RF Power Measurement.

RESULTS: The UARFCN 1007, 1037, 1062, 1087 & 1107 channels all demonstrate compliance with the emission mask specified by ETSI TS 25.141; the carriers do not exceed the mask limitation. The data plots showing HSDPA (TM5), with 24 active channels, are attached below.

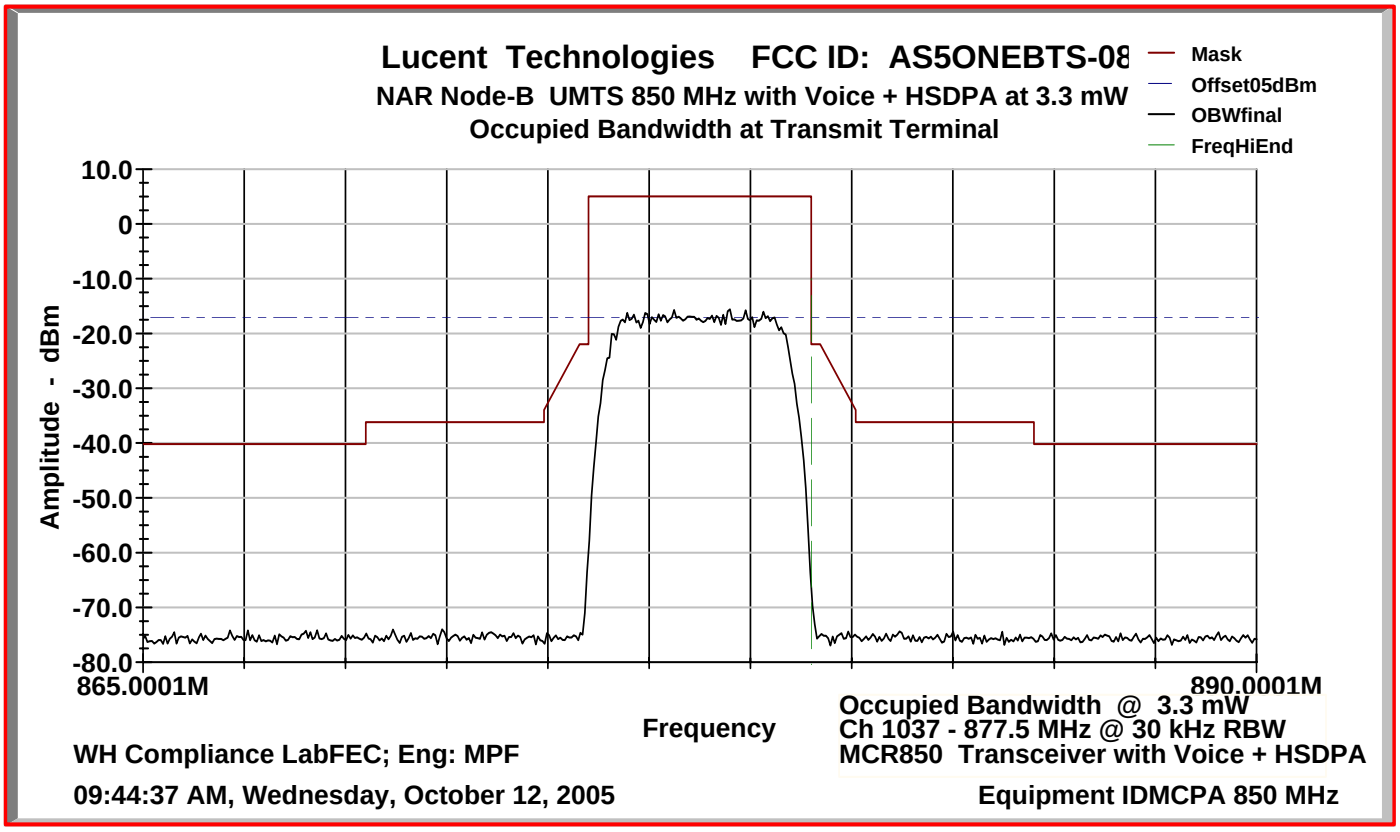
Occupied Bandwidth Characteristics: UARFCN Channel Number 1007 (871..5 MHz)
Tx Transmit Terminal at +5 dBm dBm per single 5 MHz carrier

Voice + High Speed Downlink Packet Access (HSDPA) with 24 Active Channels



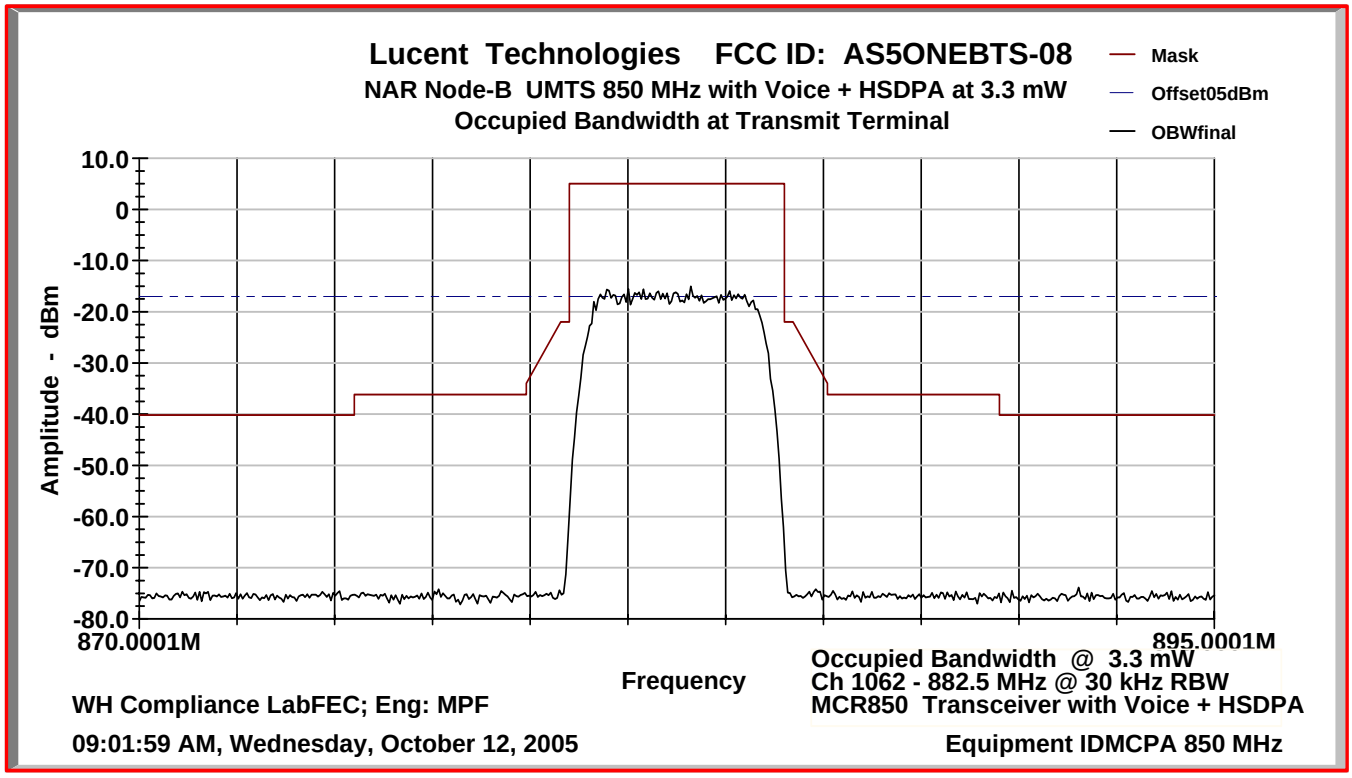
Occupied Bandwidth Characteristics: UARFCN Channel Number 1037 (877..5 MHz)
Tx Transmit Terminal at +5 dBm dBm per single 5 MHz carrier

Voice + High Speed Downlink Packet Access (HSDPA) with 24 Active Channels



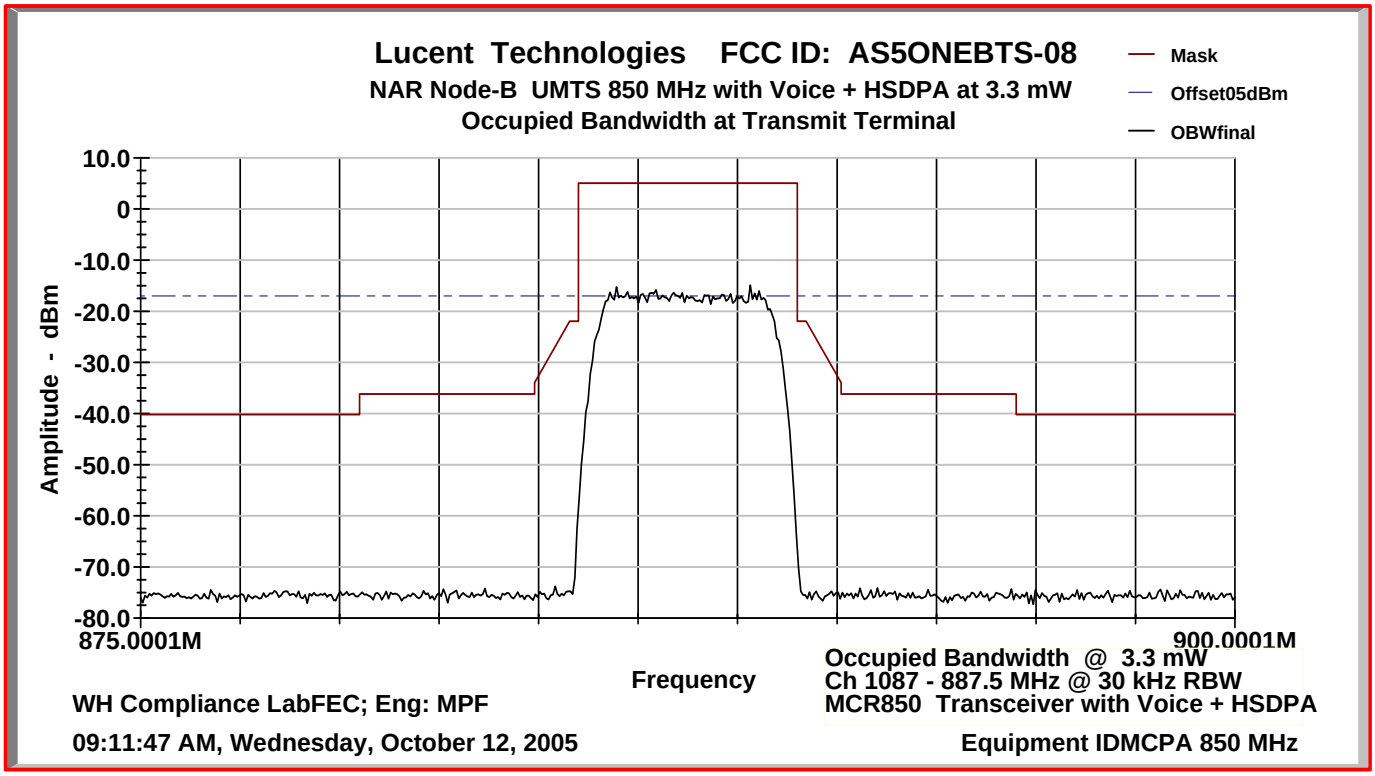
Occupied Bandwidth Characteristics: UARFCN Channel Number 1062 (882..5 MHz)
Tx Transmit Terminal at +5 dBm dBm per single 5 MHz carrier

Voice + High Speed Downlink Packet Access (HSDPA) with 24 Active Channels



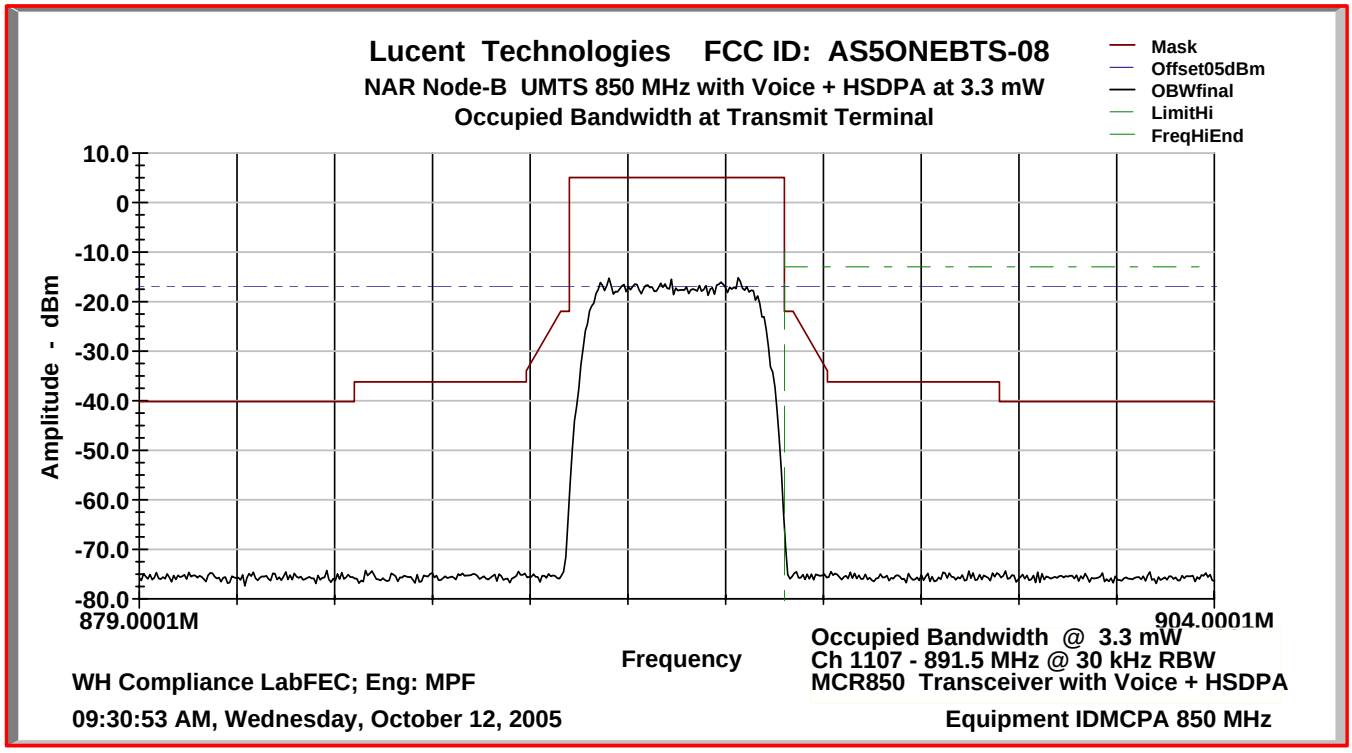
Occupied Bandwidth Characteristics: UARFCN Channel Number 1087 (887..5 MHz)
Tx Transmit Terminal at +5 dBm dBm per single 5 MHz carrier

Voice + High Speed Downlink Packet Access (HSDPA) with 24 Active Channels



Occupied Bandwidth Characteristics: UARFCN Channel Number 1107 (891..5 MHz)
Tx Transmit Terminal at +5 dBm dBm per single 5 MHz carrier

Voice + High Speed Downlink Packet Access (HSDPA) with 24 Active Channels



PART 2.1051 MEASUREMENTS REQUIRED: SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS.

This test procedure is an extension of the occupied bandwidth measurement at the MCPA Equipment Transmit Connector Terminal, using the same carrier frequencies, power level setting procedure and modulated carrier offset procedure. In accordance with Part 2.1057(a), the required frequency spectrum to be investigated extends from the lowest RF signal generated to the 10^{th} harmonic of the carrier at the EAC terminal. The emission limits at the antenna terminal are specified in Part 22.917 (a) … the power of any emission shall be attenuated below the transmitter power (*P*) by at least 43 + 10 log (*P*) dBc. The power *P* is the average carrier power measured at the transmit terminal (Tx) in Watts. Setting the power level at Tx to 0.0033 Watts average, produces an emission attenuation below the carrier of 18 dBc. Part 22.917 (b) specifies the required Resolution Bandwidth (RBW) to be 100 kHz or greater. In accordance with Part 2.1051, "the magnitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be specified"; i.e., these are not reportable. Hence, the measurement equipment must be adjusted and configured to provide an instrumentation noise floor that is at least 20 dB or more below the 43 + 10 log (*P*) dBc limit, which equates to 38 dBc. The pertinent test parameters are:

1.	Frequency Spectrum:	10 MHz to 10 GHz
2.	Resolution Bandwidth:	100 kHz (Part 22.917)
3.	Emission Limitation:	43 + 10 log (*P*) dBc = 43 + 10 log (3.3 Milliwatts) = 18 dBc
4.	Instrumentation Noise Floor:	at least 20 dB greater than "43 + 10 log (*P*) dBc" = 38 dBc

Minimum Standard Requirement:

The emission limits at the antenna terminal are specified in Part 22.917 (a) … the power of any emission shall be attenuated below the transmitter power (*P*) by at least 43 + 10 log (*P*) dBc. (i.e., attenuation below the unmodulated carrier). The power *P* is the average carrier power measured at the transmit terminal in Watts. The measurement equipment must be adjusted and configured to provide an instrumentation noise floor that is 20 dB or more below the 43 + 10 log (*P*) dBc limit. In summary:

1. Carrier Power Level = 5 dBm
2. Emission Limitation = 5 dBm – 18 dBc = -13 dBm
3. Reportable Emission Limit = -13 dBm – 20 dBc = - 33.0 dBm
4. Emission power levels less than – 33 dBm are not reportable; i.e., at $\geq$ 38 dBc

Test Set-up and Configuration: Same as previously used for Part 2.1046 RF Power Measurement.

Method of Measurement:

In order to suppress the instrumentation noise floor sufficient to detect and measure spurious signals that have power levels as low as 20 dB below the required limit, or as low as –33 dBm (i.e., 38 dBc), an EMC software package was employed to drive the spectrum analyzer, collect and compile the acquired data, perform mathematical corrections to the data by incorporating (i.e., programming) pre-measured path losses into the software, and then generate a graphical display as shown in this exhibit. The software package is: *TILE/IC (Total Integrated Laboratory Environment/Instrument Control System)*; purchased and licensed from Quantum Change/EMC Systems, Inc. The instrumentation noise floor is suppressed by the software's ability to split the spectrum being measured into many small segments, perform the mathematical corrections to each segment, and then sequentially compile all the segments into a continuous graphical display.

Part 22.917 requires that emissions over the required spectrum 10 MHz to 10 GHz be measured using an instrumentation resolution bandwidth of 100 kHz or greater. The TILE/IC software was able to sufficiently suppress the normally high noise floor by measuring the spectrum in a sequential series of short segments using a peak detector, in combination with an appropriate low-pass filter and then with an appropriate high-pass filter, installed at the input terminal of the spectrum analyzer, to prevent the carrier from over driving the spectrum analyzer. The spectrum portion 894 MHz – 1.3 GHz, in close proximity to the carrier, was measured without filters.

The specific EMC test filters used were manufactured by TRILITHIC, Inc., Indianapolis, IN:

1. Low Pass Filter: Model 10LC800-3-AA; Product No. 23042
2. High Pass Filter: Model 4HC1400/8000-1-KK; Product No. 23042

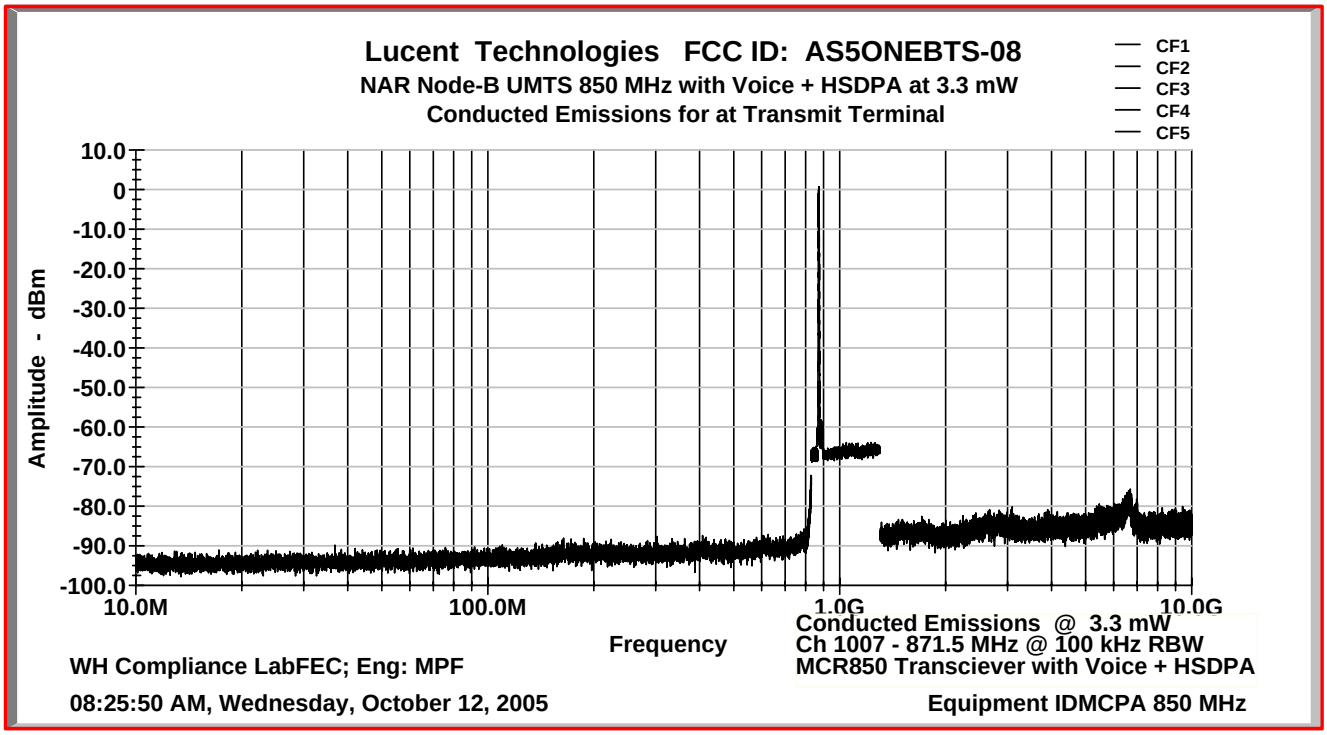
The UARFCN 1007, 1037, 1062, 1087 & 1107 channels, tabulated below, all demonstrate compliance with the conducted emission limitation requirements specified by Part 22.917.

Cellular Frequency Band	UMTS850 Carrier	Single Carrier Bandwidth	UARFCN Channel Number	UMTS Carrier Center Frequency	Measured Carrier Power at Antenna Terminal
A	Lowest Settable for A-Band and to 869 MHz Band Edge	5 MHz	1007	871.5 MHz	+5 dBm
A	Highest Settable for A-Band	5 MHz	1037	877.5 MHz	+5 dBm
B	Lowest Settable for B-Band	5 MHz	1062	882.5 MHz	+5 dBm
B	Highest Settable for B-Band	5 MHz	1087	877.5 MHz	+5 dBm
B’	Highest Settable to 894 MHz Band Edge	5 MHz	1107	891.5 MHz	+5 dBm

Results: The most complex modulation scheme: ETSI TS 25.141 Rel 5, Test Model 5 (TM5) = VOICE [with QPSK modulation and 20 active channels] + High Speed Downlink Packet Access (HSDPA) [with 16QAM modulation and 4 active channels] was used for all tests. This provided a total of 24 active channels within the 5 MHz emission bandwidth. For each UMTS carrier, there were no reportable emissions. Data plots for each carrier are attached to this exhibit

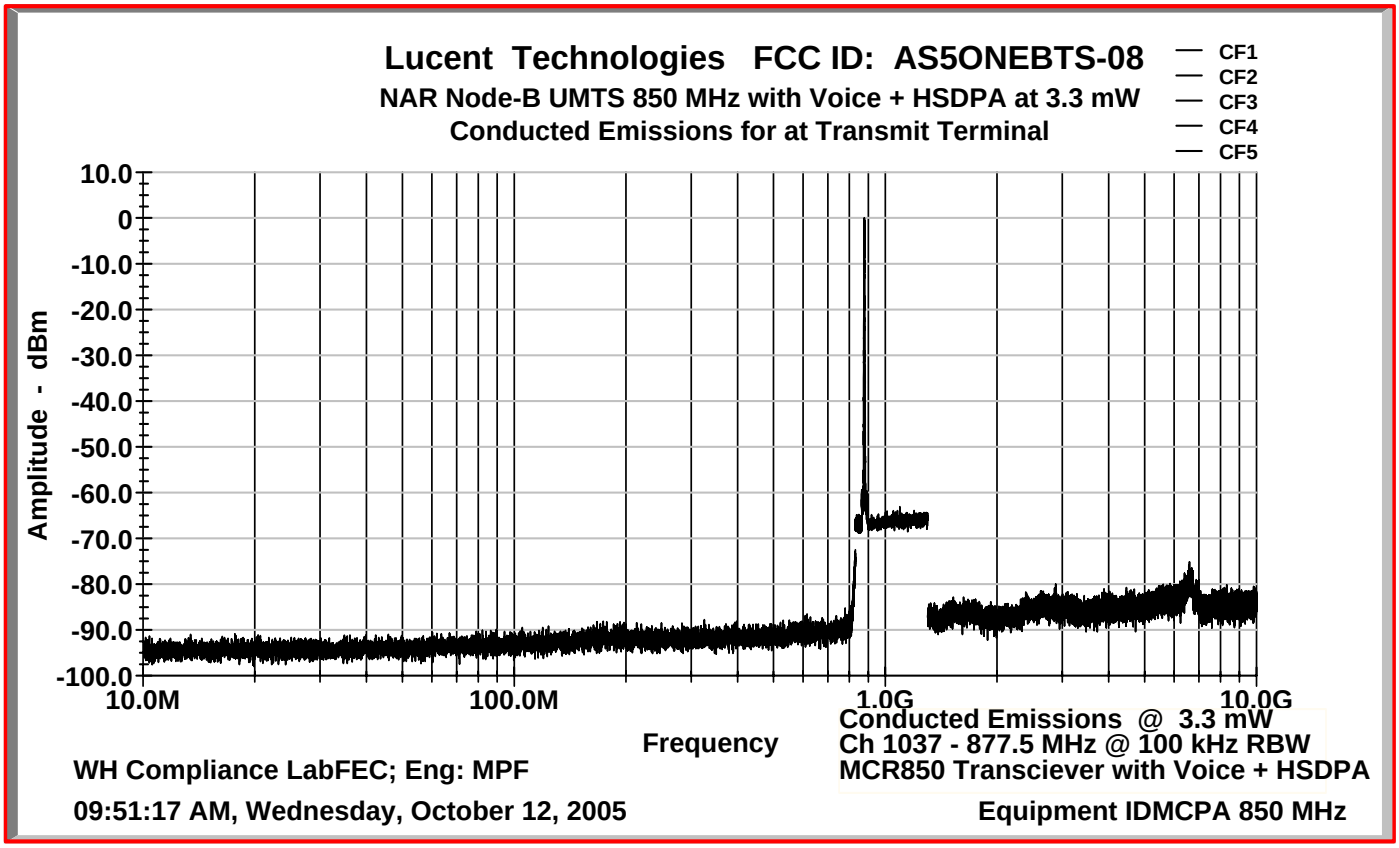
Conducted Emissions Characteristics: UARFCN Channel Number 1007 (871..5 MHz)
Tx Transmit Terminal at +5 dBm dBm per single 5 MHz carrier

Voice + High Speed Downlink Packet Access (HSDPA) with 24 Active Channels



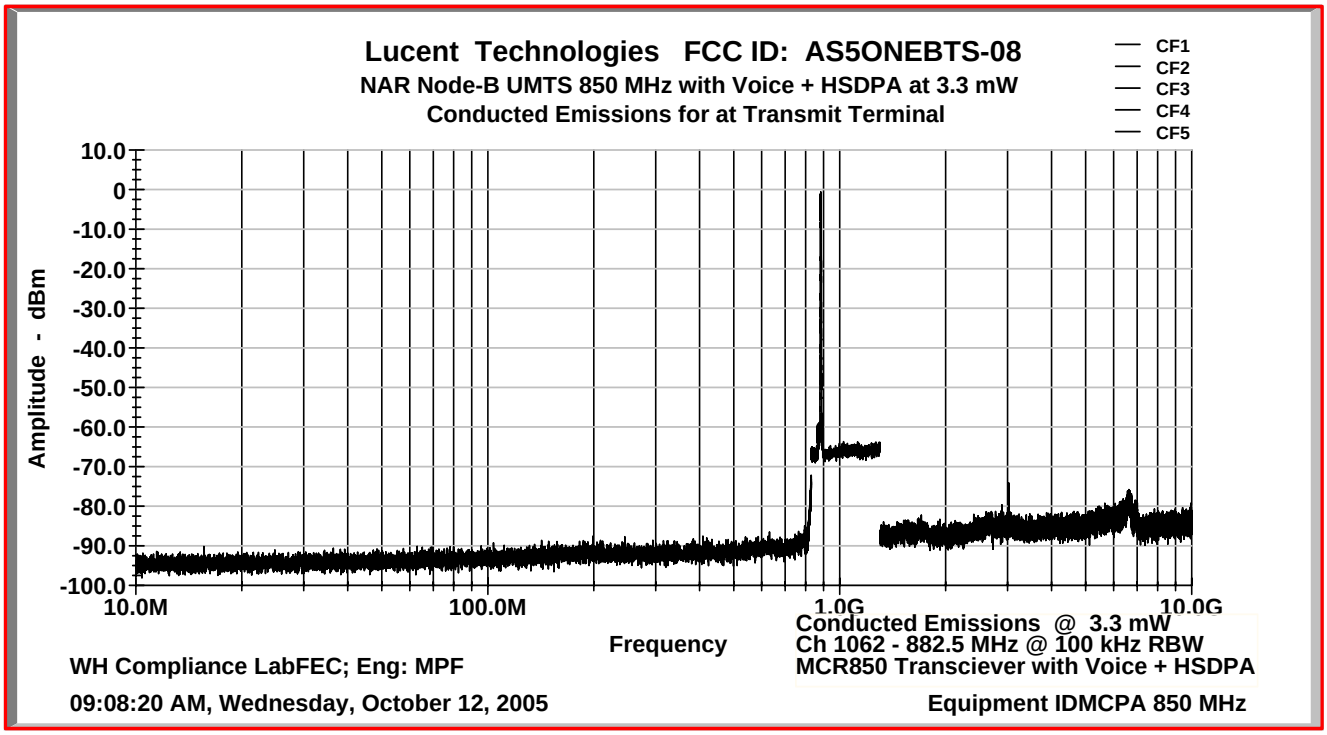
Conducted Emissions Characteristics: UARFCN Channel Number 1037 (877..5 MHz)
Tx Transmit Terminal at +5 dBm dBm per single 5 MHz carrier

Voice + High Speed Downlink Packet Access (HSDPA) with 24 Active Channels



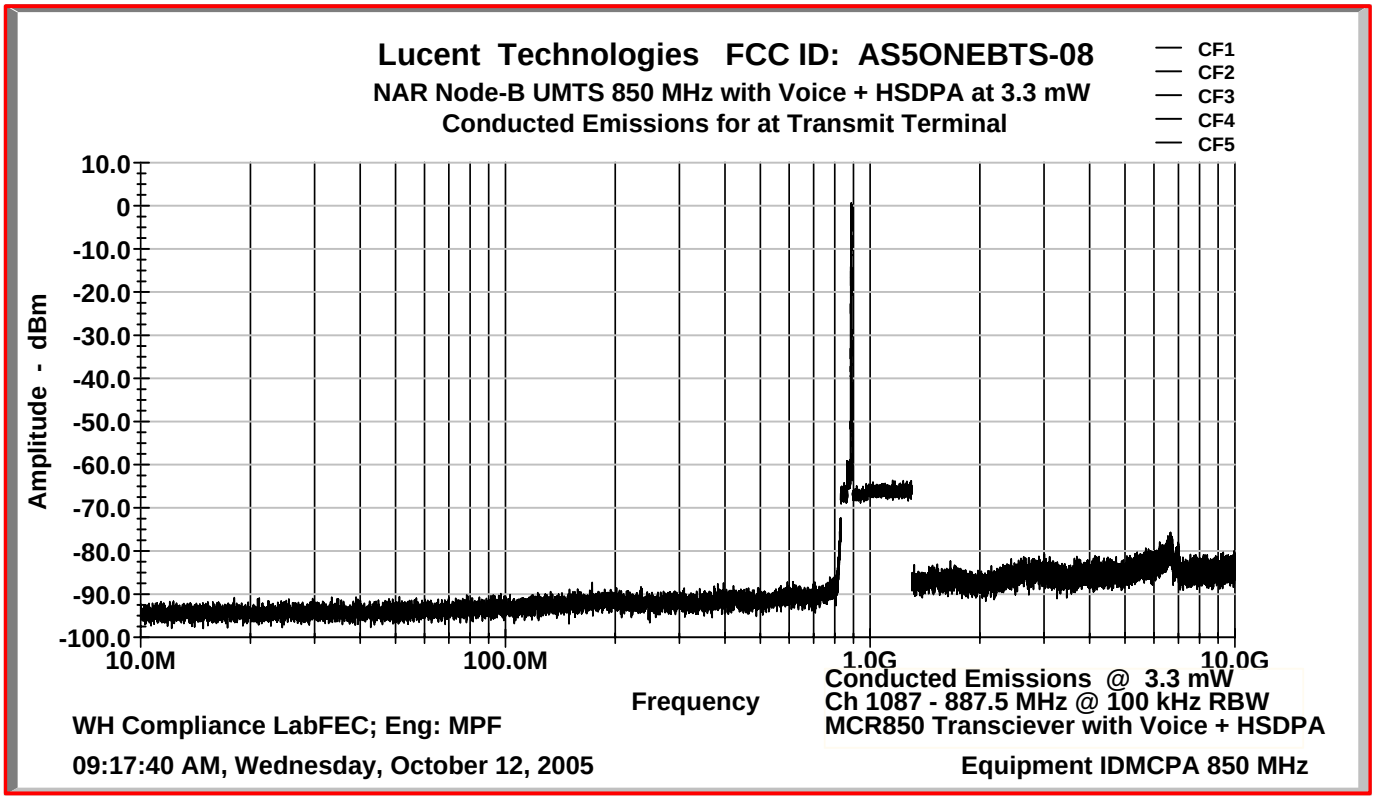
Conducted Emissions Characteristics: UARFCN Channel Number 1062 (882..5 MHz)
Tx Transmit Terminal at +5 dBm dBm per single 5 MHz carrier

Voice + High Speed Downlink Packet Access (HSDPA) with 24 Active Channels



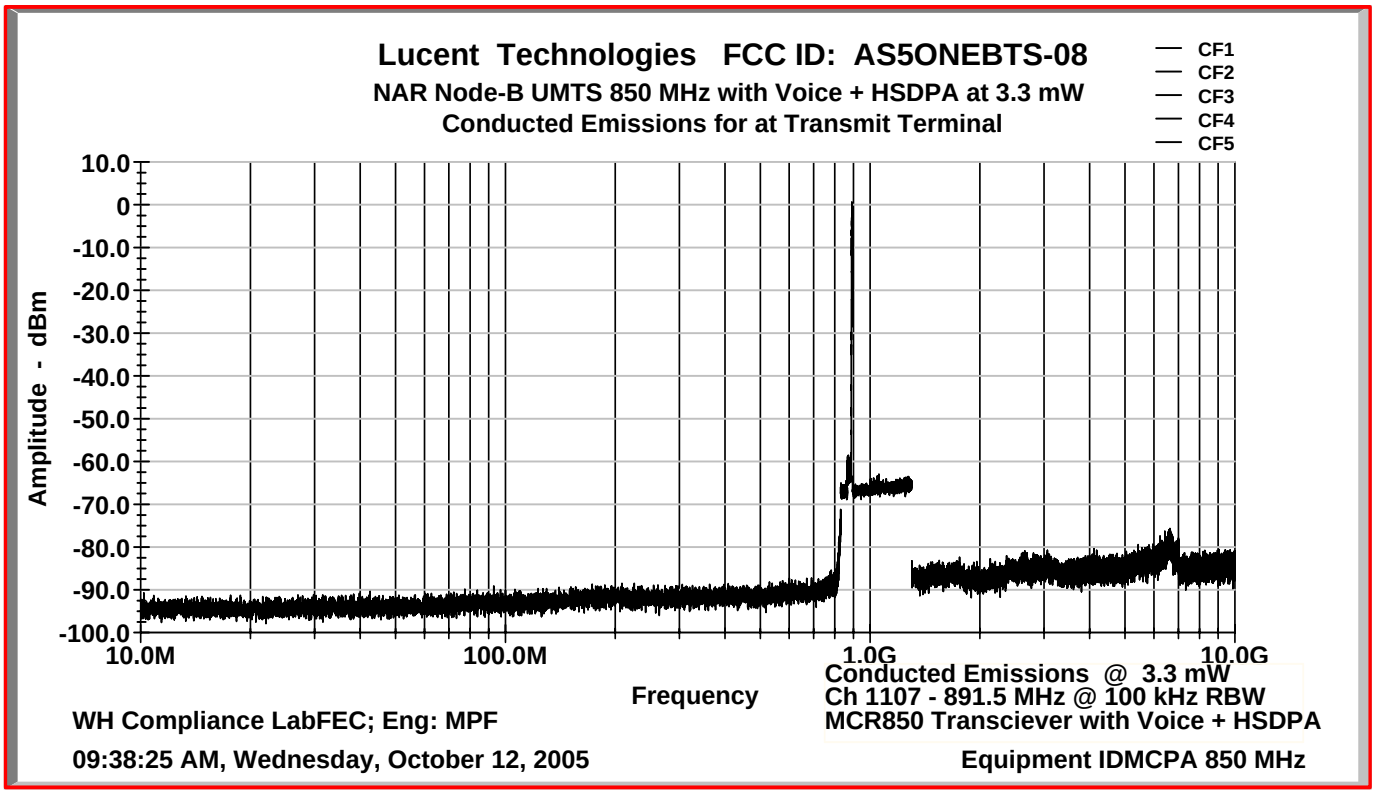
Conducted Emissions Characteristics: UARFCN Channel Number 1087 (887..5 MHz)
Tx Transmit Terminal at +5 dBm dBm per single 5 MHz carrier

Voice + High Speed Downlink Packet Access (HSDPA) with 24 Active Channels



Conducted Emissions Characteristics: UARFCN Channel Number 1107 (891..5 MHz)
Tx Transmit Terminal at +5 dBm dBm per single 5 MHz carrier

Voice + High Speed Downlink Packet Access (HSDPA) with 24 Active Channels



PART 2.1053 MEASUREMENTS REQUIRED: FIELD STRENGTH OF SPURIOUS RADIATION

This test requires a single carrier per sector, each at maximum rated power (3.3 Milliwatts), transmitting into a non-radiating dummy load. The equipment frame is configured for 3 sectors at 1 carrier per sector (3S1C). As required, the frequency range investigated was from 10 MHz to 10 GHz (10^{th} harmonic of the carrier) as in the previous conducted spurious emissions test procedure. Sectors 1, 2 and 3 were set to the the lowest settable, mid-band and the highest settable, respectively, over the spectrum 869 – 894 MHz. The radiated emission scan was made with all 3 sectors transmitting and the UMTS carriers/channels set to UARFCN 1007, 1062 and 1107, respectivel. The corresponding carrier center frequencies are as cited in the previous occupied bandwidth tests, with each carrier adjusted to provide 3.3 Milliwatts (+5 dBm) at the MCPA equipment frame transmit terminal. The most complex modulation scheme: ETSI TS 25.141 Rel 5, Test Model 5 (TM5) = VOICE [with QPSK modulation and 20 active channels] + High Speed Downlink Packet Access (HSDPA) [with 16QAM modulation and 4 active channels] was enabled. This provided a total of 24 active channels within the 5 MHz emission bandwidth.

In compliance with the guidelines of ANSI C63.4-2003, the equipment under test (EUT) was configured as recommended for *floor standing equipment*. The EUT was installed and operated as in the *normal mode of operation* with external alarm and T1 cables connected to the EUT and routed as prescribed in ANSI C63.4-2003. Field strength measurements of radiated spurious emissions were evaluated in a 3m semi-anechoic pre-compliance chamber and verified as required at the ten meter Open Area Test Site (OATS) maintained by Lucent Technologies FCC Compliance Laboratory in Whippany, New Jersey. A complete description and full measurement data for the site have been placed on file with the Commission.

The spectrum from 10 MHz to the tenth harmonic of the carrier was searched for spurious radiation. Measurements were made using both horizontally and vertically polarized broadband antennas. Per FCC regulations, the comparison of out of band spurious emissions directly to the limit is appropriately made using the substitution method. However, when the emissions are more than 20 dB below the specification limit, the use of field strength measurements for compliance determination is acceptable and those emissions are considered not reportable (Section 2.1053 and the FCC Interpretive database for 2.1053). For this case the evaluation of acceptable radiated field strength is as follows.

The calculated emission levels were found by:

Pmeas (dBm) + Cable Loss(dB) + Antenna Factor(dB) + 107 (dBμV/dBm) -Amplifier Gain (dB)
= Field Strength (dBμV/m)

Section 22.917 and 2.1053 contains the requirements for the levels of spurious radiation as a function of the EIRP of the unmodulated carrier. The reference level for the unmodulated carrier is calculated as the field produced by an isotropic radiator excited by the transmitter output power according to the following relation taken from Reference Data for Radio Engineers, page 27-7, 6th edition, IT&T Corp.

$$E = (120\pi P)^{1/2} = [(30*P)^{1/2}] / R$$

$$20 \log (E*10^6) - (43 + 10 \log P) = 71.77 \text{ dB } \mu\text{V/meter}$$

Where: E = Field Intensity in Volts/ meter R = Distance in meters = 10 m
P = Transmitted Power in watts = 0.0033 W/ Carrier

Results:

For this particular test, the field strength of any spurious radiation is required to be less than 71.8 dBμV/meter. Emissions equal to or less than 51.8 dBμV/meter are not reportable and may be verified using field strength measurements. Over the out of band spectrum investigated from 30 MHz to tenth harmonic of the carrier, no reportable spurious emissions were detected. This demonstrates that the Cellular Frequency UMTS-CDMA "Multi-Carrier CDMA Radio" (MCR850), Model BNJ65, the subject of this application for a Class II Permissive Change Authorization, complies with Sections 2.1053, 22.917 and 2.1057 of the Rules. The "External Multi-Carrier Power Amplifier" (MCPA) 850 MHz wireless base station equipment frame is equally compliant.

PART 2.1055 MEASUREMENTS REQUIRED: FREQUENCY STABILITY

The frequency stability was measured at the MCPA Equipment Transmit Terminal, which corresponds to the MCR850 transceiver output terminal for a single carrier set UARFCN 1062 (882.5 MHz). Frequency stability measurements were performed by M. Coelho, Lucent Technologies, Swindon, United Kingdom, under the direction of M. P. Farina, and in adherence to the previously cited ISO/TL9000 test plan. This test program was conducted during the approximate interval October 10 – 14, 2005. The complete test reports are attached, which show the test results, test equipment configuration and photographs of the test set-up.

The procedure required by the FCC is specified in CFR 47, Part 2, Subpart J – Equipment Authorization Procedures, Section 2.1055 – Measurements Required: Frequency Stability, Effective: October 01, 2004. The requirements for base station/land station equipment, are summarized as:

Section 2.1055(a)(1): The frequency stability shall be measured with variation of ambient temperature from –30 °C to +50 °C

Section 2.1055(b): Frequency measurements shall be made at the extremes of the specified temperature range and at intervals of not more than 10 °C through the range. A period of time sufficient to stabilize all of the components of the oscillator circuit at each temperature level shall be allowed prior to frequency measurement. The short term transient effects on the frequency of the transmitter due to keying (except for broadcast transmitters) and any heating element cycling normally occurring at each ambient temperature level also shall be shown. (*Note: The term "keying" does not apply to base station/land station equipment. "Heating element" applies to "heat cartridges" if used* .) Only the portion or portions of the transmitter containing the frequency determining and stabilizing circuitry need be subjected to the temperature variation test.

Section 2.1055(d)(1): The frequency stability shall be measured with variation of primary supply voltage from 85% to 115% of the nominal value.

Frequency Stability Limitation:

The frequency stability is the measurement of the carrier center frequency deviation from its assigned value as a function of (1) temperature variation from – 30°C to + 50°C, in +10°C increments, and (2) variation of supply voltage, at the equipment frame power input terminals, from 85% to 115% of the nominal value. This is a lengthy procedure and is performed one time with a single UMTS carrier set to UARFCN 1062 (882.5 MHz). The required tolerance limit for UMTS 850 base station/land station equipment is specified in ETSI TS 25.141 as ± 0.05 ppm.

Results:

The Cellular Frequency UMTS-CDMA "Multi-Carrier CDMA Radio" (MCR850), Model BNJ65, the subject of this application for a Class II Permissive Change Authorization, under FCC ID: AS5ONEBTS-08, demonstrated full compliance with the requirements of FCC Rule Part 2.1055. The frequency stability for all measurements were well within the required ± 0.05 ppm, as shown in detail in the attached Test Report. The "External Multi-Carrier Power Amplifier" (MCPA) 850 MHz wireless base station equipment frame configuration is equally compliant.

UMTS

Node B Compliance

03.01

TEMEX OMA

Test Report

850MHz Flexent® UMTS Macrocell

FCC 47 CFR 2.1055

Number:
Issue: 0.01
Status: Draft

Author: Michael Coelho
Date: 21 June 2005

Summary

This report describes the FCC 47 CFR 2.1055 tests completed on the Flexent UMTS Macrocell to verify compliance of the TEMEX OMA.

Functional tests were scheduled during the thermal test conditioning.

The test results showed that when the equipment was powered up all functional tests passed. These were:

Frequency Error
OMA Frequency Stability

CONTENTS

Object

This test was carried out to determine the frequency stability of the TEMEX OMA in a Flexent® UMTS Macrocell Outdoor (3S1C 40 Watt) equipped cabinet over the temperature range –30°C to 50°C and at voltage extremes of +/- 15% from nominal (230V).

Introduction

This document contains the results of the FCC 47 CFR 2.1055 tests carried out on the Flexent® UMTS Macrocell to:

[3.3.1] 5026735 - Test Plan for MCPA850 with MCR850 Synthesizer Fix for U03.01, as an FCC Class II Permissive Change Filing under FCC ID AS5ONEBTS-08 by Michael P. Farina

Also included are lists showing the ancillary test equipment, equipment under test and functional tests conducted.

-22. Glossary

A/C	Alternating Current
°C	Degree Celsius
ETSI	European Telecommunications Standards Institution
HIOU	Hybrid Input Output Unit
Node B	UMTS Base Station
OMA	Oscillator Module
RH	Relative Humidity
RX	Receive
SRD	System Requirement Definition
TX	Transmit
MCR	Multi Carrier Radio
UCU	Universal Channel Unit
UDT	UMTS Diagnostic Tool
UMTS	Universal Mobile Telecommunication System
3S1C 40W	Three Sector, One Carrier, Forty Watt System

Scope

This test was applied to the Flexent® UMTS Macrocell as per product specification [3.3.2] (3S1C 40Watt) equipped cabinet. It was configured to released 03.01.

Specifications

[3.3.1] 5026735 - Test Plan for MCPA850 with MCR850 Synthesizer Fix for U03.01, as an FCC Class II Permissive Change Filing under FCC ID AS5ONEBTS-08.

[3.3.2] Agile - Document Number KS-24705 (L100) – OneBTS Compact Cell Outdoor Cabinet IRD-UTRAN-UTR-1 VERSION3.1

Standards

[3.4.3] ESTI TS 125 141 V5.8.0 (2003-12) Release 5

[3.4.4] Title 47--Telecommunication 47 Part 2 -- Frequency Allocations and Radio Treaty Matters; General Rules and Regulation, 2.1055 Measurements required: Frequency stability.

Equipment

-22. Under Test

The Flexent® UMTS Macrocell (3S1C 40Watt) equipped cabinet was equipped with hardware as listed in Appendix A - Table 4.0.

Appendix A contains the full list of equipment under test, together with their serial numbers.

-21. Test Equipment

The test equipment used to perform the investigation has been documented in Appendix B - Table 5.0 Figure 1.0 shows a schematic view of the test equipment layout

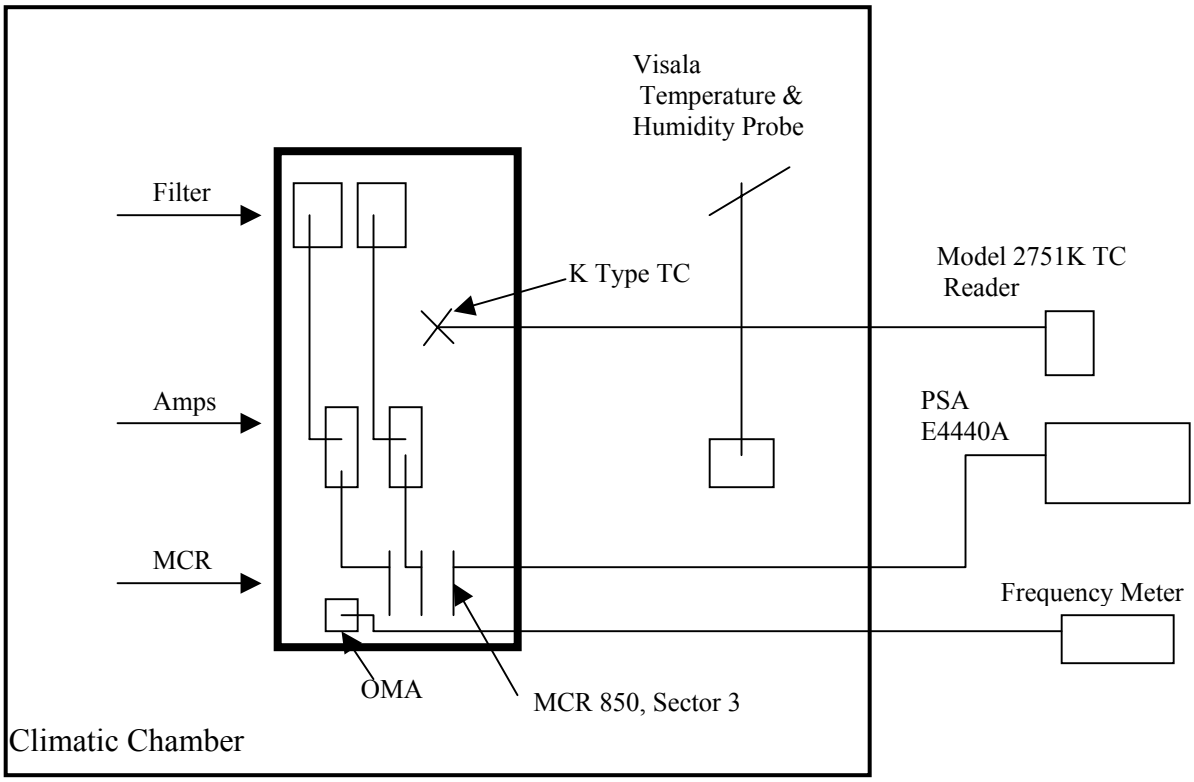


Figure 1.0 – Schematic Layout of Test Equipment

Test Procedure

-22. Test Set up

Prior to starting, the hardware was installed into the cabinet as per specification [3.3.2] and configured to U03.01 release.

Note: The cabinet was installed onto its plinth arrangement (optional) and then secured to a transportation pallet (for ease of installation and transportation into the thermal test chamber) during thermal test conditioning.

Test Parameters

a) Points of Measurement: i) The MCR measured at its RF output terminal
ii) The Oscillator Module measured at its 15 MHz output terminal.

b) Carrier Modulation: Test Model 1 (Pmcr = 5.2dBm)
Test Model 4 (Pmcr – 18dB = 12.8dBm)

c) Test Frequencies: The FCC accepts a single test frequency, 882.5 MHz

d) Carrier Power Level: The transmit power level at the MCR TX port adjusted to +5.2dBm.

e) Temperature Range: Variation of ambient temperature from –30°C to +50°C. Stabilized at increments of 10°C.

f) Supply Voltage Variation:

Input Supply Voltage	AC Input Voltage
85 % of Nominal	195.5 Vac
100 % of Nominal	230.0 Vac
115 % of Nominal	264.5 Vac

Table 1 Supply Voltage Variation

Functional Tests

Functional tests were carried out during thermal conditioning at stabilized temperatures. Measurement of Frequency Error and OMA Frequency Stability were taken

The universal diagnostic tool (UDT) used to perform the tests was version 3.0.0.

Results

Stabilized Temperature °C	Meas. Freq. 85 % Nom. Hz	Deviation 85 % Nom. ppm	Meas. Freq. 100 % Nom. Hz	Deviation 100 % Nom. ppm	Meas. Freq. 115 % Nom. Hz	Deviation 115 % Nom. ppm
- 30°C	0.06	0.0040	0.06	0.0040	0.06	0.0040
- 20°C	0.06	0.0040	0.06	0.0040	0.06	0.0040
- 10°C	0.05	0.0033	0.06	0.0040	0.05	0.0033
0°C	0.06	0.0040	0.06	0.0040	0.06	0.0040
+ 10°C	0.06	0.0040	0.04	0.0027	0.06	0.0040
+ 20°C	0.03	0.0020	0.04	0.0027	0.04	0.0027
+ 30°C	0.03	0.0020	0.03	0.0020	0.06	0.0040
+ 40°C	0.03	0.0020	0.04	0.0027	0.03	0.0020
+ 50°C	0.04	0.0027	0.03	0.0020	0.03	0.0020

Table 2 FCC 47 CFR 2.1055 OMA Stability

Testing Temperature	Voltage Variation	MCR3	
		TM1Pmcr	TM4Pmcr –18dBm
-30 °C	- 15%	-3.93Hz 5.5 dBm	4.76 Hz -12.3 dBm
	Nominal	5.88Hz 5.6 dBm	4.36 Hz -12.3 dBm
	+15%	6.12Hz 5.6 dBm	7.03 Hz -12.3 dBm
-20 °C	- 15%	5.34Hz 5.5 dBm	3.97 Hz -12.4 dBm
	Nominal	5.56Hz 5.6 dBm	5.94 Hz -12.4 dBm
	+15%	4.32Hz 5.6 dBm	4.72 Hz -12.4 dBm
-10 °C	- 15%	4.30Hz 5.5 dBm	4.68 Hz -12.3 dBm
	Nominal	4.51Hz 5.5 dBm	5.66 Hz -12.4 dBm
	+15%	4.45Hz 5.5 dBm	-3.21 Hz -12.3 dBm
0 °C	- 15%	3.92Hz 5.5 dBm	4.61 Hz -12.5 dBm
	Nominal	4.22Hz 5.5 dBm	6.00 Hz -12.4 dBm
	+15%	3.08Hz 5.4 dBm	4.42 Hz -12.5 dBm
10 °C	- 15%	3.58Hz 5.4 dBm	-4.37 Hz -12.5 dBm
	Nominal	3.69Hz 5.4 dBm	3.98 Hz -12.4 dBm
	+15%	4.30Hz 5.4 dBm	-3.83 Hz -12.4 dBm
20 °C	- 15%	5.31Hz 5.5 dBm	5.52 Hz -12.4 dBm
	Nominal	7.83Hz 5.5 dBm	4.58 Hz -12.4 dBm
	+15%	4.22Hz 5.5 dBm	3.89 Hz -12.4 dBm
30 °C	- 15%	5.29Hz 5.5 dBm	7.16 Hz -12.4 dBm
	Nominal	4.01Hz 5.5 dBm	5.24 Hz -12.4 dBm
	+15%	4.52Hz 5.5 dBm	5.96 Hz -12.4 dBm
40 °C	- 15%	4.56Hz 5.5 dBm	6.83 Hz -12.4 dBm
	Nominal	-6.07Hz 5.5 dBm	4.89 Hz -12.4 dBm
	+15%	5.10Hz 5.5 dBm	5.45 Hz -12.4 dBm
50 °C	- 15%	-5.62Hz 5.4 dBm	6.49 Hz -12.4 dBm
	Nominal	5.82Hz 5.4 dBm	5.81 Hz -12.4 dBm

	+15%	4.16Hz 5.3 dBm	-5.91 Hz -12.5 dBm

Table 3 FCC 47 CFR 2.1055 Frequency Error Measurement

Conclusions

The TEMEX OMA meets the FCC Title 47 Part 2.1055 Frequency stability requirements.

APPENDIX A

Equipment Under Test

Table 4 details the Node B hardware.

BTS Element	Comcode	Serial number	Comment
Cabinet	---	05WH06404001	ODM3
Filter panel	408889947	057D02003323	Dual Duplexor #1
Filter panel	408889947	057D02001622	Dual Duplexor #2
Filter panel	408903250	05C805002135	Dual Duplexor #3
P2PAM	408837490	04BG63110016	PAM #1
P2PAM	408837490	04BG71110011	PAM #2
C2PAM	408762268	04BG57070054	PAM #3
MCR	109448449	04W367A90023	1900 #1
MCR	109448449	04W367A90030	1900 #2
MCR	201245297	05W344C105246	850 BNJ 65 S3:5 AM2 #3
CTU	108875030	03G004307648	S3 1:3
UCU	201173276	03RC11030038	UCU II #1
UCU	201173276	03RC11030013	UCU II #2
UCU	201173276	03RC11030108	UCU II #3
URC II	109510792	05Y901021050	44 WW65 P2
Oscillator Module	408886042	05TM02050508	---
CPC-A	---	04KZ12003792	CPC-A #1
CPC-B	---	01T766001687	CPC-B #1
CPC-B	408646032	04KZ10001350	CPC-B #2

Table 4 – Equipment Under Test

APPENDIX B

Test Equipment

Table 5 details the test equipment used to conduct the testing.

Equipment	Make & Model Number	Serial Number	Calibration
Thermal Chamber	Design Environmental WIR 18-64HS	A2834	Sept 06
Universal Frequency Counter	Fluke PM6685R	SM668746	Dec 05
Power Signal Analyser	Agilent – E4440A	MY44303412	Jan 06
Humidity and Temperature Sensor	Vaisala HMT335	A0230008	Jan 06

Table 5 – Test Equipment

APPENDIX C

Functional Tests

The following functional tests were carried out during thermal conditioning. These functional tests and the system configurations were extracted from the requirements

Test	Configuration	Functional Test	Notes
FCC 47 Part 2.1022	3S1C 40W *Cabinet A/C Powered* Note MCR Sector 3 will Tx@ 5.2dBm	TX:TM1. Power Out Frequency Error	Sector 3 (TX1 MCR)
		TX: TM 4 Pmax-18dBm Frequency Error	Sector 3 (TX1 MCR)
		TX: OMA Frequency	OMA

Table 6 – Functional Tests

Functional Test	Pass / Fail Criteria
TX: Power Out	+/- 0.5dB MCR Power Output;
TX: Frequency Error	(50 Parts Per Billion = 0.05 Parts Per Million) TX Frequency, 876.5 MHz x 0.05 PPM = (+/- 44.13Hz)
OMA Frequency Accuracy	(50 Parts Per Billion = 0.05 Parts Per Million) PPM = +/- 0.75Hz

Table 7 – Functional Tests Pass / Fail Criteria

All functional test Pass / Fail Criteria was extracted from Standards [3.4.3].

APPENDIX D

BTS Testing Photographs

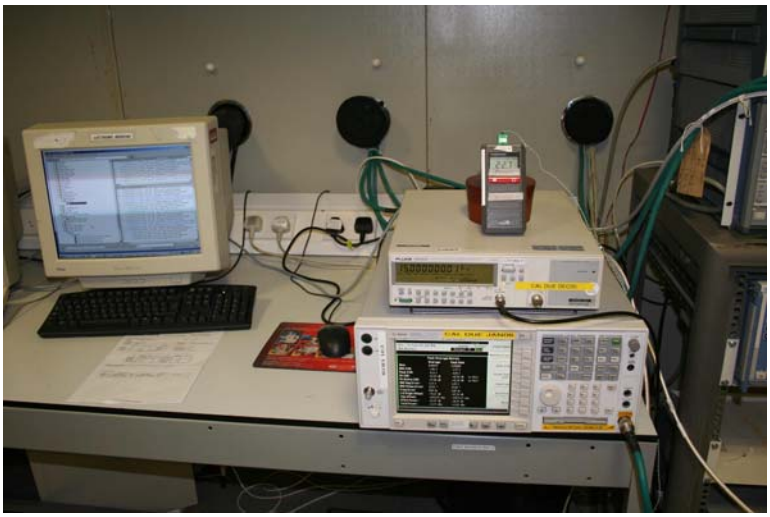


Figure 2 Test Equipment used in Measurement

Figure 3 Closed BTS under Test

Figure 4 Open BTS under Test