

EXHIBIT 3: FCC REQUIRED INFORMATION (PART 2.1033)

The following information is presented in the content and format requested by the FCC:

Section 2.911 (d) Qualification Of Engineers

Section 2.911 (d): Technical test data shall be signed by the person who performs or supervises the tests. The person signing the test data shall attest to the accuracy of such data. The Commission may require such person to submit a statement showing that he is qualified to make or supervise the required measurements.

Michael P. Farina is a Member of Technical Staff at Alcatel-Lucent USA, Inc., Whippany, NJ, formerly AT&T Bell Laboratories, with 49 years of Professional Experience in Research and Development. He holds a BS in Physics from Upsala College and an MSEE from New Jersey Institute of Technology. During the past 18 years, his expertise was focused on RF Engineering and Regulatory Agency EMC compliance and certification, covering Analog, TDM, CDMA and UMTS technologies, in evolving RF design technology and wireless base station design configurations. He has submitted numerous Applications for Equipment Certification filings to the FCC covering many product variations and evolutions in each of the four technologies. Currently, he is the Lead Engineer for filing UMTS Wireless Base Station products with the FCC.

Rudolf J. Pillmeier
Technical Manager
FCC/EMC Compliance Test Group
Whippany, New Jersey

Section 2.911 (e)(g) Certification of Technical Test Data

Section 2.911 (e) The signatures of the applicant and the person certifying the test data shall be made personally by those persons on the original application; copies of such document may be conformed. Signatures and certifications need not be made under oath.

Section 2.911 (g) Signed, as used in this section, means an original handwritten signature; however, the Office of Engineering and Technology may allow signature by any symbol executed or adopted by the applicant with the intent that such symbol be a signature, including symbols formed by computer-generated electronic impulses.

I hereby certify that the technical test data are the results of tests either performed or supervised by me.

Michael P. Farina
Member of Technical Staff
FCC/EMC Compliance Test Group
Whippany, New Jersey

Section 2.1033 (c)(1):

The full name and mailing address of the manufacturer of the device and the applicant for certification.

**Alcatel-Lucent USA, Inc.
600-700 Mountain Ave
Murray Hill, NJ 07974**

Section 2.1033(c)(2): FCC Identifier **AS5ONEBTS-10**

Section 2.1033(c)(4):
Type or types of emission: **4M10F9W**

Section 2.1033(c)(5): Frequency range **Transmit: 1930–1990 MHz**

Section 2.1033(c)(6):

Range of operating power values or specific operating power levels, and description of any means provided for variation of operating power.

Alcatel-Lucent's Broadband PCS **UMTS-CDMA Transceiver System (1900)**, which is incorporated into the UMTS Flexent® OneBTS™ W1900M wireless base station, was previously authorized by the Federal Communications Commission under the FCC ID: AS5ONEBTS-10. The **UMTS-CDMA Transceiver System (1900)** consists of the RF components: (1) Crystal Reference Oscillator Module (OMA) at 15 MHz, (2) UMTS-CDMA Multi-Carrier CDMA Radio (MCR1900), Model BNJ64, which was previously authorized by the Federal Communications Commission under FCC ID: AS5ONEBTS-09, (3) P2PAM power amplifier (PA), and (4) 60 MHz bandwidth Dual Duplex (DDpx) transmit filter covering the PCS spectrum 1930-1990 MHz. These components are considered as a system due to the DDpx filters providing RF feedback to the transceiver in the form of Closed Loop Gain Control (CLGC) to provide constant power with over temperature and Alcatel-Lucent's proprietary Enhanced Digital Pre-Distortion (EDPD-UL) technology which enables software to communicate between the transceiver, power amplifier and the transmit filter to achieve this goal.

The original FCC Grant of Equipment Authorization for the Alcatel-Lucent **UMTS-CDMA Transceiver System (1900)** and subsequent Permissive Changes, under FCC ID: AS5ONEBTS-10, have consistently authorized the **UMTS/W-CDMA Transceiver System** to transmit at 40 Watts for a single power amplifier in the system. This Class II Permissive Change requests authorization to operate at 80W with two (2) power amplifiers (PA) in parallel within the same system, maintaining the previously authorized 40W power per PA to be combined at the Tx antenna terminal for a composite 80W single carrier power. This RF power rating is based on the 3-second average, employing the Aggregate Overload Control (AOC) algorithm. Enhanced Digital Predistortion (EDPD) and Closed Loop Gain Control (CLGC) are features that are enabled for each carrier

The MCR1900 (UMTS-CDMA Multi-Carrier CDMA Radio) transceiver, power amplifier (P2PAM) and Reference Frequency Oscillator are unchanged; the frequency determining and stabilization circuitry are unchanged. The necessary bandwidth (NB) remains at 4M10F9W and the frequency tolerance at ± 0.05 ppm, over the Broadband PCS (Part 24, Subpart E) 60MHz frequency spectrum 1930 - 1990 MHz remains unchanged.

The host wireless base station equipment frame utilized in this testing is the Node-B UMTS Indoor Dual Band Macrocell. However, only the 1900 MHz sectors were active to provide 3S1C for each of two (2) RF Chains via dual duplex transmit filters. The parallel PAs are interconnected by appropriate 1:2 power splitters and 2:1 power combiners.

Section 2.1033(c)(7):

Maximum power rating as defined in the applicable part (s) of the rules.

The maximum power rating of Alcatel-Lucent's **UMTS-CDMA Transceiver System (1900)** is 40W RF power with a single P2PAM power amplifier (PA) in the system and 80W with two (2) parallel P2PAM power amplifiers in that same system.

EXHIBIT 3: FCC REQUIRED INFORMATION (PART 2.1033) - continued

Section 2.1033 (c)(8):

The dc voltages applied to and the dc currents into the several elements of the final radio frequency amplifying device for normal operation over the power range.

The dc voltage applied to the UMTS Flexent™ OneBTS™ W1900M wireless base station equipment frame is nominally +24 Vdc; the equipment is rated to operate over the range 19-30 Vdc with a typical setting of 26.5 Vdc and a maximum input current of 75 Adc.

The nominal dc voltage and range of dc currents input to a single PCS UMTS Power Amplifier, P2PAM, of the UMTS-CDMA Transceiver System (1900) is summarized as follows:

Single P2PAM Power Amplifier			
Typical Input Voltage	Worst Case Maximum Input Current	Rated Maximum Input Current	Minimum Input Current (No RF Input)
+26.0 Vdc	25.0 Adc	21.1 Adc	7.0 Adc

Section 2.1033 (c)(9):

Tune-up procedure over the power range, or at specific operating power levels.

The Alcatel-Lucent **UMTS-CDMA Transceiver System (1900)**, under FCC ID: AS5ONEBTS-10, can not be “tuned-up” by the user. There are no user tune-up features. All tuning is performed by the manufacturer during, and as part of, the manufacturing process.

Section 2.1033 (c)(10)

A description of all circuitry and devices for determining and stabilizing frequency.

The Alcatel-Lucent **UMTS-CDMA Transceiver System (1900)**, which utilizes a 5 MHz carrier emission bandwidth, is designed to operate in the Broadband PCS frequency spectrum. Frequency stability of the carrier frequency is achieved with an accuracy better than the rated ± 0.05 ppm by the 15 MHz reference frequency generated by a stable Crystal Oscillator Module (OMA) plus proprietary phase locked loop (PLL) circuitry.

Section 2.1033 (c)(10): Description of circuitry and devices for suppression of spurious radiation.

Spurious emissions radiated from Alcatel-Lucent’s **UMTS-CDMA Transceiver System (1900)** are suppressed by implementing sound Electromagnetic Compatibility (EMC) design practices extending from the circuit board level to the system level: 1) grounded RF shielding on coaxial cables, 2) grounded RF shielding “cans” mounted on the circuit packs, 3) effective grounding throughout, and 4) effective transmit and receive bandpass filters for the Broadband PCS frequency band 1930-1990 MHz. The Tx filter is a 60 MHz wideband, low loss, tuned cavity Dual Duplex (Dpx) design covering the full 1930-1990 MHz spectrum, and suppresses transmitted spurious and harmonic emissions by more than 20 dB below the FCC required limitation.

EXHIBIT 3: FCC REQUIRED INFORMATION (PART 2.1033) - continued**Section 2.1033 (c)(10): Description of Circuitry and Devices for Limiting Modulation, and for Limiting Power.**

The Alcatel-Lucent **UMTS-CDMA Transceiver System (1900)** PCS UMTS-CDMA Multi-Carrier CDMA Radio (MCR1900), BNJ64, previously authorized under FCC ID: AS5ONEBTS-09, is a 5 MHz carrier emission bandwidth UMTS (W-CDMA) base station transceiver designed to operate in the Broadband PCS frequency band 1930-1990 MHz. Modulation limiting is described in the documents that must be held as confidential. This confidential document is the same document that was submitted to and is currently on file with the Federal Communications Commission for the initial equipment authorization grant for AS5ONEBTS-09.

Power control of the RF output from the MCR1900 transceiver is accomplished by software which controls a microprocessor that sends digital signals to a 18 dB voltage variable attenuator, which is used for output power adjustment. The transmitter can be disabled through firmware which sets the RF attenuator to maximum loss and thus disables the final RF amplifier stage. A complete description is provided in the exhibits that are required to be held as confidential. This confidential document is the same document that was submitted to and is currently on file with the Federal Communications Commission (FCC) for the initial equipment authorization grant for AS5ONEBTS-09.

Section 2.1033 (c)(13): Description of the modulation system.

The Alcatel-Lucent PCS UMTS-CDMA Multi-Carrier CDMA Radio (MCR1900), BNJ64, previously authorized under FCC ID: AS5ONEBTS-09, is a 5 MHz carrier emission bandwidth UMTS (W-CDMA) base station transceiver, designed to operate in the Broadband PCS frequency spectrum 1930-1990 MHz. It is the transceiver which comprises **UMTS-CDMA Transceiver System (1900)**.

This 5 MHz carrier emission bandwidth UMTS (W-CDMA) is designed for QPSK modulation, with an emission designator 4M1F9W. The modulation process is fully described in the documents that must be held as confidential. This confidential document is the same document that was submitted to and is currently on file with the Federal Communications Commission (FCC) for the initial equipment authorization grant for AS5ONEBTS-09. The MCR1900 transceiver can transmit Voice, Data or HSDPA (High Speed Downlink Packet Access) modulated information.