

Lucent Technologies
Bell Labs Innovations



**Federal Communications Commission
Office of Engineering and Technology
Equipment Authorization Division,
Application Processing Branch**

Lucent Technologies Inc.
67 Whippany Road
Whippany, NJ 07981

September 30, 1999

Federal Communications Commission
Office of Engineering and Technology
Authorization and Evaluation Division
Equipment Authorization Branch
7435 Oakland Mills Road
Columbia, Maryland 21046

Dear Examiner:

In accordance with Parts 2 and 22 of the Commission's Rules and Regulations, we are submitting herewith, statements and supporting data to show compliance with the requirements of the Commission for Product Certification of the Lucent Technologies Corp. Cellular CDMA Ultra Linear Amplifier / Multi Carrier Amplifier, henceforth **ULAM**, **FCC ID: AS5CMP-35**. This **ULAM** is used in Lucent Technologies Corp **FLEXENT**® Land Station Cellular System using Code Division Multiple Access (CDMA) technology, for use in Domestic Cellular Services.

This application for the **ULAM**, under **FCC ID: AS5CMP-35**, is for operation in the Standard Cellular Bands A and B.

The **ULAM** is a nominally 40 Watt Class AB CW amplifier designed to provide 20 watts of long term average at the antenna connection port. During actual operation under the dynamic conditions of CDMA service this amplifier will provide 30 watts per carrier at the antenna connection port (J4) and this is the value used for this filing.

The **ULAM** is configurable in a single, dual or three amplifier "Multi Carrier Amplifier" (**MCA**) with external passive signal combiners and splitters. In these configurations, the **ULAM/ MCA**, provides up to 30 watts per carrier in each of the **MCA** configurations (single, dual or three amplifier) with a total J4 antenna port RF power of 30, 60 or 90 watts for each of the respective configurations. Under the dynamic conditions of CDMA service a maximum of 30 watts per carrier/ 90 Watts total will be available at the antenna port (J4) of the three **ULAM / MCA** and this is the value to be used for this filing.

The data summarized below is in the form presently used by the Commission's Radio Equipment List.

Manufacturer	Lucent Technologies, Inc.
Equipment Identification	AS5CMP-35
Rules Part Number	22 (H)
Frequency Range	869 -894 MHz Cellular Bands
Output Power	0.2 to 30.0 Watts/carrier–up to 90 watts total (3 carrier): Varied By Software
Frequency Tolerance	+/- 0.5 ppm
Emission Designator	1M23G9W

The unit is called the Cellular Ultra Linear Amplifier Module/ Multi Carrier Amplifier. It is designed to the limitations specified in Part 22 subpart H. Whenever possible, the test procedures defined in CFR 47 Parts 2 and 22(H) were followed. Because of the “state of the art” nature of this equipment, some of the characteristics cannot be tested using the requirements in CFR 47. For those characteristics ANSI J-STD-008 were used to define the tests and evaluation criteria used in this application.

The **ULAM**, at its output, is typically operated over the power range of 0.20 to 60.0 watts/carrier. Losses internal to the Modular Cell cabinet, software control, and the passive components of the Multi Carrier Amplifier configuration will limit the output power to 30.0 watts/ carrier when measured at the (J4) antenna connector. The total power is limited to the latter value and is the level for this application. The actual power levels delivered by the **ULAM/ MCA** are under the software control of the Mobile Switching Center of the local Cellular system. The software control only allows for adjustment in power up to the 30.0 Watt maximum. This filing to operate the **ULAM/ AS5CMP-35** is based upon signals supplied to the **ULAM** by a Lucent Technologies Inc. CDMA Baseband Radio 850 (**CBR-850** henceforth **CBR**), **FCC ID: AS5CMP-28**, granted 20 April 1999 for the Cellular Band.

This application for **AS5CMP-35**, is for the expanded Cellular Spectrum. Since this application encompasses the single, dual and three carrier configurations it presents the required test data for each of those **ULAM/ MCA** operational configurations.

The **ULAM/ AS5CMP-35** is produced by Lucent Technologies Inc. solely for incorporation into Lucent Technologies Inc. products. The **CBR/ AS5CMP-28** is a Lucent Technologies Inc. designed and manufactured products.

Enclosed in this electronically transmitted online package is a copy of FCC Form 731 (Application for Equipment Authorization - Radio Frequency Devices) and the required exhibits. These exhibits contain the technical data, and the required statements and documents for Product Certification. The technical contact at Lucent Technologies, Bell Laboratories, will comply with any request for additional information should the need arise.

Sincerely,

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Att
FCC Form 731 w/ Attachments

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