

Lucent Technologies Bell Labs Innovations

To: Timco Engineering Inc. Telecommunication Certification Bodies 849 NW State Road 45 Newberry, Florida 32669 From: Lucent Technologies Inc. 67 Whippany Road Whippany, NJ 07981

July 29, 2004

Subject: Application for Certification of FCC ID: AS5ONEBTS-06

Dear Examiner:

In accordance with Parts 2 and 24 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 a FCC Class II Change of the Product Certification of the Lucent Technologies Corp **PCS 2 Power Amplifier Module**, henceforth **P2PAM**, under **FCC ID: AS5ONEBTS-06**, for use in Domestic Personal Communication Services. This **P2PAM** is used in Lucent Technologies Corp **FLEXENT (B)** Land Station Cellular system using Code Division Multiple Access (CDMA) technology, for use in Domestic Personal Communication Services.

The **P2PAM** was previously filed and granted as a single carrier CDMA amplifier on 10/16/2004 under **FCC ID: AS5ONEBTS-06**. This Class II application for the **P2PAM** under **FCC ID: AS5ONEBTS-06**, is to add the two amplifier bridged Multi Carrier Amplifier (MCA) operation for one to three carriers. This Class II application for the **P2PAM** is for operation in all PCS Blocks with a CDMA signal.

The **P2PAM** is designed to amplify signals of all of the various CDMA wireless air interfaces including **cdmaOne**[™] under **IS-95**, the **3G-1x** (single carrier) formats of **CDMA2000** under **IS-97** and the high speed "data only" operation under the **IS-856** CDMA wireless air interface standard of **3G-1x-EV-DO**.

The **P2PAM** is a nominally 52 Watt, Class A, fixed gain, CW amplifier designed to provide 16 watts of average long term power per carrier at the antenna connection port. The **P2PAM** can be configured with external passive signal combiners and splitters as a single or bridged "Multi Carrier Amplifier" (MCA). Like the single **P2PAM** configuration the dual amplifier **P2PAM/ MCA** is also operated at 16 watts per carrier. Under the dynamics conditions of CDMA service a maximum of 20 watts per carrier is provided and this is the FCC filed power level. The dual amplifier **P2PAM/ MCA** will accommodate one to three carriers at the FCC power level of 20 W/carrier. In this configuration a total of 20, 40 or 60 Watts total will be available at the antenna port.

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

Manufacturer	Lucent Technologies, Inc.
Equipment Identification	AS5ONEBTS-06
Rules Part Number	24 (E)
Frequency Range	1930–1990 MHz All PCS Blocks
Output Power	0.010 to 20.0 Watts/carrier -1 to 3 carriers, 60 Watts Total
Frequency Tolerance	N/A
Emission Designator	1M25F9W

This filing to operate the **P2PAM / FCC ID: AS5ONEBTS-06** is based signals supplied by a Lucent Technologies **PCS UMTS CDMA Radio 1900 (UCR1900), FCC ID: AS5ONEBTS-04**, granted 24 September 2002 for all PCS Blocks. The **P2PAM** was primarily evaluated in the Lucent Technologies Flexent[®] OneBTS[™] CDMA PCS Modular Cell 4.0 Transceiver Station (BTS). The unit is designed to the limitations specified in Code of Federal Regulations (CFR), Section 24 Subpart E, and is designed to be used with other FCC granted transmit (radio) devices. Whenever possible, the test procedures defined in CFR Sections 2 and 24 (E) 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, **IS-95**, **IS-97** and **IS-856** were used to define the tests and evaluation criteria used in this application. The **P2PAM** was designed in accordance with the latest **3GPP2** guidelines of **C.S0010-A** and **TIA/EIA/IS-97-D** standard for CDMA applications.

The P2PAM / AS5ONEBTS-06 data presented in this filing represents a design produced by Remec / Spectrian Corporation for Lucent Technologies, Inc. solely for incorporation into Lucent Technologies, Inc. products. The **PCS UCR1900** is a Lucent Technologies, Inc. designed and manufactured product.

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.

Enclosed in this application package are a copy of Timco's TCB Application Form 731, a letter of Request for Confidentiality and the required exhibits. These exhibits contain the technical data, and the required statements and documents for equipment certification. The technical contact at Lucent Technologies Bell Laboratories will comply with any request for additional information should the need arise.

The fees are submitted as required for a FCC Class II Change to a Product certification filing.

Sincerely,

R.J.Pillmeier Technical Manager Wireless FCC Compliance Group Phone: 973-386-3837 email: rpillmeier@lucent.com

Att FCC Form 731 w/ Attachments

Primary Administrative Contact Lucent Technologies, Inc. Room 4C-621 101 Crawfords Corner Rd Holmdel, NJ 07733-3030 U.S.A. Attention: Cynthia S. Donovan Phone: (732) 949 2938 email: <u>csdonovan@lucent.com</u>

TABLE OF CONTENTS

Exhibit 1	Section 2.911 (d)	Qualifications and Certifications
Exhibit 2	Section 2.1033(c) (1,2)	Manufactures, FCC Identifier
Exhibit 3	Section 2.1033(c) (4,5,6,7)	Emission, Freq. Range, Power Range, Maximum Power
Exhibit 4	Section 2.1033(c) (8)	Active Circuit Devices Drive Levels
Exhibit 5	Section 2.1033(c) (10)	Complete Circuit Diagrams
Exhibit 6	Section 2.1033(c) (3)	Instruction Book
Exhibit 7	Section 2.1033(c) (9)	Tune-Up procedure
Exhibit 8	Section 2.1033(c) (10)	Circuitry for determining frequency
Exhibit 9	Section 2.1033(c) (10)	Circuitry for Suppression of Spurious
Exhibit 10	Section 2.1033(c) (13)	Description of Modulation System
Exhibit 11	Section 2.1033(c) (14)	Listing of Required Measurements
Exhibit 12	Section 2.1046	Measurement of Radio Frequency Power Output
Exhibit 13	Section 2.1047	Measurement of Modulation Characteristics
Exhibit 14	Section 2.1049	Measurement of Occupied Bandwidth
Exhibit 15	Section 2.1051	Measurement of Spurious Emissions at Antenna
Exhibit 16	Section 2.1053	Field Strength of Spurious Radiation
Exhibit 17	Section 2.1055	Measurement of Frequency Stability
Exhibit 18	Section 2.1033(c) (11)	Drawing of the Identification Label
Exhibit 19	Section 2.1033(c) (12)	Photographs of the Equipment
Exhibit 21		Test Equipment List

Exhibit 1

July 29, 2004

SECTION 2.911 (d) QUALIFICATION OF ENGINEERS

Walter Steven Majkowski is a Member of Technical Staff at Lucent Technologies Bell Laboratories. He holds a BSEE from New Jersey Institute of Technology and was trained in the FCC testing procedures. Mr. Majkowski is the Lead engineer for the filing of CDMA Wireless Base station products at Lucent Technologies. Mr. Majkowski is a NARTE certified EMC engineer, Certificate number EMC-001859-NE, and has at least twenty four years of EMC design and testing experience.

R.J.Pillmeier Technical Manager Wireless FCC Compliance Group

SECTION 2.911 (d) CERTIFICATION OF TECHNICAL TEST DATA

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

Walter Steven Majkowski NCE Member Technical Staff Whippany Compliance Laboratory