



**Federal Communications Commission  
Office of Engineering and Technology  
Equipment Authorization Division  
Application Processing Branch  
7435 Oakland Mills Road**

**Columbia, MD 21046**

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March 19, 2010

Dear Examiner:

Alcatel-Lucent's PCS High Efficiency EDPD P4PAM Transceiver System is the subject of this request for FCC Product Certification under **FCC ID: AS5ONEBTS-25** as a CDMA Base Station Transceiver at 80 Watts of total power per amplifier. One and two multi carrier amplifier configurations of the P4PAM Transceiver system are utilized in the **9228 Base Station Macro System** (Formally PCS FLEXENT 4.0 and 4.0B Modular Cells). The P4PAM Transceiver system uses Alcatel-Lucent's patented Enhanced Digital Predistortion (EDPD), PCS Multi-Carrier Radios (MCR-1900 FCC ID: AS5ONEBTS-09) and Dual Duplex Transmit filters to form an integrated transceiver system.

Alcatel-Lucent's P4PAM Transceiver System (P4PAM) (1900 MHz) is designed to operate in the North America Region (NAR) Broadband Personal Communications Service (1900 MHz). The P4PAM Transceiver System can be configured for various digital modulations systems. This application is for Code Domain Multiple Access (CDMA) only. Future use for other modulation systems and the remainder of the PCS band will be processed by application for an FCC via a Class II Change as is appropriate. Configured for CDMA the P4PAM Transceiver System can be configured and operated for one to eleven CDMA carriers at 80 Watts of total composite RF power per amplifier. One and two amplifier configurations are presented in this application. The MCR-1900 which was previously filed under AS5ONEBTS-09 (without the use of EDPD) provides the generation and stabilization of the transmit signal has not changed.

The RF power rating is based 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 single CDMA carrier has a 1.25 MHz bandwidth, with an emission designator at 1M25F9W, based on measurement of the Necessary Bandwidth. The CDMA modulation capability demonstrated includes: 1) up to 40 active channels, consisting of 37 voice + 3 control channels.

This FCC Product Certification Filing applies to the **1M25F9W** CDMA Emissions designator to be authorized under **FCC ID: AS5ONEBTS-25**. The measurement exhibits attached to this application demonstrate full compliance with FCC Part 24 Subpart E – Broadband PCS following the procedural requirements specified in FCC Part 2 Subpart J – Equipment Authorization Procedures. The data, summarized below, is in the form presently used by the Commission's Radio Equipment List.

<b>Equipment Identification:</b>	<b>AS5ONEBTS-25</b>
<b>Rules Part Number:</b>	<b>Part 24, Subpart E – Broadband PCS</b>
<b>Frequency Range:</b>	<b>Transmit 1950–1965 MHz (PCS Block B)</b>
<b>Output Power:</b>	<b>0.08 to 80 Watts Total Power per amplifier (2 to 11 CDMA carriers)</b>
<b>Frequency Tolerance:</b>	<b>± 0.05 ppm</b>
<b>Emission Designator:</b>	<b>1M25F9W</b>

Attached are the FCC Form 731 (Application for Equipment Authorization – Radio Frequency Devices), the required measurement data and exhibits specific to this request for initial equipment authorization of the **PCS P4PAM EDPD Transceiver System**. The technical or non-technical contact at Alcatel-Lucent will comply with any request for additional information should the need arise. The attached exhibits with the applicable FCC Rule section are assembled and presented in

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Use pursuant to Company Instructions.

accordance with the *Table of Contents* attachment. Included is a formal letter requesting confidentiality for the following exhibits:

- (1) User's Manual
- (2) Internal photographs
- (3) Schematics, Circuit descriptions and Block Diagrams

Should there be any questions or procedural issues please feel free to contact me by email and/or phone.  
Sincerely,

Dheena Moongilan  
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### Test Report Exhibits

<u>Exhibit #</u>	<u>FCC Rule Number</u>	<u>Description of Test Report Exhibits</u>
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