



**Timco Engineering Inc.
FCC Authorized Telecommunications
Certification Body (TCB)**

Alcatel-Lucent USA Inc.
Building 5-111
600 Mountain Avenue
New Providence, NJ 07974

June 30, 2015

Sid Sanders - President
Timco Engineering Inc.
849 N.W. State Road 45
P.O. Box 370
Newberry, Florida 32669

Dear Mr. Sanders

The Alcatel- Lucent PCS RRH 4x45W, the subject of this request for a Class II Permissive Change, was previously authorized under **FCC ID: AS5BBTRX-05** as a 45 watt per port PCS Radio Head Transceiver for **1M25F9W** CDMA and **5M00F9W** LTE in the extended PCS Band 25 spectrum. This Class II change requests the authorization of an additional emissions designator, **10M0F9W** supporting 10 MHz LTE operation under the 3GPP2 Long Term Evolution (LTE) communication standard. The hardware remains the same. There were no physical, hardware or circuit changes required to either the internal Multi Carrier Radio, power amplifier or transmit filters. Specifically the frequency generating and stabilizing component of the **AS5BBTRX-05** authorization, has not changed. All required supporting exhibits which were not previously submitted with the initial filing, are attached.

The Alcatel- Lucent PCS RRH 4x45W configures new digital source baseband information to the internal Multi Carrier Radio to provide the new LTE emissions designator but it does not change the previously authorized per port RF power.

This Class II change applies the 10M0F9W Emissions designator for PCS Blocks A, D, B, E, F, C and G for operation under **FCC ID: AS5BBTRX-05**.

The original FCC Product Certification authorized operation was Granted on 04/30/2012 for the entire 1930-1995 MHz downlink band. This Class II Change is for the addition of a greater capacity 10 MHz LTE designator. The per port maximum power rating remains unchanged at 45W per port when operated as a 4x MIMO LTE transmitter. The measurement exhibits attached to this application demonstrate full compliance with FCC Part 24.253 and KDB 662911 D1 and 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.

Grant Note:	MO
Equipment Identification:	AS5BBTRX-05
Rules Part Number:	Part 24- Subpart E – Broadband PCS
Frequency Range:	Transmit 1930-1995 MHz (PCS Block A-G, all blocks)
Output Watts:	40
Frequency Tolerance:	± 0.05 ppm
Emission Designator:	10M0F9W

Attached are the FCC Form 731 (Application for Equipment Authorization – Radio Frequency Devices), the required measurement data and exhibits specific to this request for authorization of the PCS RRH 4x45W. 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 accordance with the *Table of Contents* attachment.

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



Raymond J. Johnson

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Att. Table of Contents for the PCS RRH 4x45W Product Certification Report

Table of Contents

Cover Letter-TOC

Confidentiality Letter

731 Form

Exhibit 1	Section 2.911 (d)	Certifications and Qualifications
Exhibit 2	Section 2.1033 (c) (1, 2, 4-7)	Manufacturer, Applicant, Identifier, Emission Types, Frequency Range, Operating Power Range and Maximum Power Rating
Exhibit 3	Section 2.1033 (c)(3)	Installation and Operating Instructions
Exhibit 4	Section 2.1033 (c)(8, 9)	DC Voltages and Currents; Tune-up Procedure
Exhibit 5	Section 2.1033 (c)(10)	Circuit Schematic Diagrams and Parts list -> Confidential
Exhibit 6	Section 2.1033 (c)(10)	Circuitry and Devices for Suppression of Spurious Radiation
Exhibit 7	Section 2.1033 (c)(10)	Circuitry for Determining and Stabilizing Frequency and for Limiting Modulation and Power -> Confidential
Exhibit 8	Section 2.1033 (c) (11)	Equipment Identification Label
Exhibit 9	Section 2.1033 (c) (12)	Photograph of the Equipment
Exhibit 10	Section 2.1033 (c) (13)	Description of the Digital Modulation System -> Confidential
Exhibit 11	Section 2.1033 (c) (14)	Test Report
Exhibit 11.1	Section 2.1033 (c)(14)	Required Measurement Data
Exhibit 11.2	Section 2.1046	Measurements Required: RF Power Output
Exhibit 11.3	Section 2.1047	Measurements Required: Modulation Characteristics
Exhibit 11.4	Section 2.1049, 24.238	Measurements Required: Occupied Bandwidth and Out-of-Band Emissions
Exhibit 11.5	Section 2.1051, 24.238	Measurements Required: Spurious Emissions at the Antenna Terminal
Exhibit 11.6	Section 2.1053, 24.238	Measurements Required: Field Strength of Spurious Radiation
Exhibit 11.7	Section 2.947 (d)	List of Test Equipment Used
Exhibit 11.8		Photographs of the Test Setups