Chapter 1
Product Description

Introduction

This manual contains information and procedures for installation, operation, and maintenance of the PAF-0813-E0-001 Multi-Carrier Power Amplifier (MCPA) Indoor System. The manual is organized into chapters as follows.

- ❑ Chapter 1 - Product Description
- ❑ Chapter 2 - Controls and Indicators
- ❑ Chapter 3 - Installation
- ❑ Chapter 4 - Maintenance
- ❑ Chapter 5 - Specifications

Scope of Manual

This manual is intended for use by service technicians familiar with similar types of equipment. It contains service information required for the equipment described and is current as of the printing date. Changes which occur after the printing date may be incorporated by a complete manual revision or alternatively as additions.

Product Description

The PAF-0813-E0-001 system, shown in the Figure 1-1 block diagram, is an 850 MHz, 4-way combined, frame-mounted BTS solution. The PAF system contains three MCPA subracks, each capable of containing up to four MCPAs, three filters, and one DC circuit breaker panel.

The MCPA subrack, shown in Figure 1-3, contains linear, feed-forward MCPAs that operate in the 869 - 894 MHz range. Each subrack is also equipped with automatic power control (APC), an ethernet connection, an RS-485/RS-232 connection, a filter I/O port, and two cooling fans. The subrack is installed on sliding rails so that it can be pulled forward to allow access to the rear of the subrack.

The MCPA, shown in Figure 1-4, is an 850 MHz module that produces a typical output of 160 watts (52.0 dBm) before system losses, with an instantaneous bandwidth of 25 MHz.

The filter assembly, shown in Figure 1-5, if used, supresses unwanted signals and non-linear components of the signal from the amplifiers.

The circuit breaker panel, shown in Figure 1-8, consists of two +27 VDC input buses (A and B), and a system circuit breaker panel. The panel receives +27 VDC from the BTS and then distributes circuit breaker protected DC power to the individual subracks.

Functional And Physical Specifications

PAF-081X-P0-001 system functional and physical specifications are listed in Chapter 5.