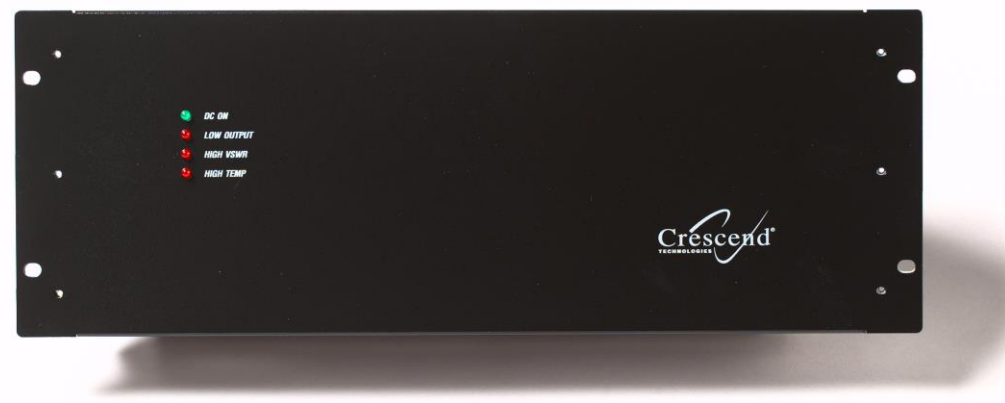




## Description and User Manual

**P10-1FA4-C5-001**

### **CONTINUOUS DUTY POWER AMPLIFIER**



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## Power Amplifiers P10-1FA4-C5-001.

### User Manual

#### 1. General description.

The power amplifier (PA) is nonlinear AB to C class unit that is intended for frequency (phase) modulated (manipulated) signals amplification.

There is the fan for forced cooling, which starts rotating, when the inside temperature reaches +65°C. The automatic power control loop keeps the output power at the rated level. It reduces this level, when the load VSWR is above 2, when the heatsink temperature exceeds +85°C or under the outer control.

Frequency range of operation (F), MHz	220 - 222;
Input power (Pin), W	1 - 4;
Output power (Pout), W, not less than	100;
Relative harmonic level, dBc, less than	-70;
DC power supply voltage (Vsup), V, nominal	48;
Allowed DC power supply voltage tolerance, V, not greater than	±1.5;
DC current, A, not greater than	4.5;
Load VSWR, not greater than	2.5;
Input VSWR, less than	1.7;
Operating temperature range, °C	-30 to +60;
RF connectors	50 Ohm N (F);
DC connectors	# 6-32 screws.

#### 2. Construction.

Unit dimensions are 19"W x 6-3/4"H x 5"D.

Four indicating LED are visible through holes in the front panel. All connectors are accessible from the back side of unit. The cooling fan is also placed on the back of chassis.

#### 3. Installation Guide.

Unit is intended for a rack installation in a standard 19" cabinet, where it requires 4U high slot. The installation shall provide a proper air access to the unit; no obstacle for air is allowed closer than 3" from fan and air exits. Copper wires # 10 AWG shall be use in DC power line. Wires shall be crimped to ring terminals.

#### 5. Operation Guide

- The power supply voltage should be in the limits 46.5 – 49.5 V;
- Do not apply RF signal out of rated 220-222 MHz frequency range;
- For transmitting the input RF power should be in the range 1...4 W.
- Do not destroy the sealing and other labels.

Green LED "DC ON" shines, if the power supply voltage is applied to the unit.

The fan rotates, when the heatsink temperature reaches +85°C.

Red LED “LOW OUT” goes on, if the output power fails to more than 1 dB below the rated level. It may indicate a problem inside the unit. Be sure that the power supply voltage and input power are in the allowed limits.

Red LED “HIGH VSWR” goes on, when the load VSWR is greater than 2 – 2.5.

Red LED “HIGH TEMP” goes on, when the heatsink te