



MODEL 7200LC-CE RF POWER AMPLIFIER – 200 WATT, 80-1000 MHZ

(Outline Drawing 1-70-759-000)

DESCRIPTION

The **Model 7200LC-CE** is a general-purpose, wideband RF power amplifier that provides 200 Watt CW minimum output power into a 50-Ohm load from 80 to 1000 MHz. Power gain is typically 53 dB which facilitates operating the amplifiers directly from commercially available signal generators with +10 dBm output into 50 Ohm. GPIB control is possible with the optional IEEE488.2/RS232 Interface Controller Module.

Features are forward and reflected power indication on a front panel-mounted, analog meter; Automatic Level Control (ALC); RF gain control; overdrive protection; full VSWR protection; input blanking, and over-temperature protection. These features, plus remote power on/off control, are also accessible for remote operation through a 25-pin, D-subminiature connector mounted on the rear panel of the PC7200LC Power Controller. For a detailed description of these features refer to **"SPECIAL FEATURES -- LA & LP-SERIES SINGLE BAND RF POWER AMPLIFIERS"**.

The amplifier comprises two units, the PC7200LC Power Controller Unit containing the switching power supply modules and RF control circuitry, and the ALA300GL Power Amplifier Unit that houses the RF power amplifier modules. The units are mounted in a standard 19-in equipment rack, 23" high and 38" deep. The units are mounted on telescoping slides. Construction is modular and all subassemblies are removable. Forced-air cooling is by highly reliable impeller fans. The amplifier operates from 187-265 V_{AC}, 47-63 Hz line. Power consumption is 2800 VA maximum. The system may be placed in 'stand-by' mode with the BLANKING switch. This greatly reduces energy consumption and heat generation.

SPECIFICATIONS

Frequency Range	: 80 -1000 MHz, broadband
Power Output	: 200 Watt CW minimum
Power Gain	: 53 dB typical
Gain Control	: 20 dB minimum
Gain Flatness	: ± 2.5 dB maximum unlevelled; ± 0.5 dB levelled
Input Impedance	: 50 Ohm nominal
Output Impedance	: 50 Ohm nominal
Spurious Outputs	: -70 dBc minimum
Harmonic Distortion	: -30 dBc minimum
Input Power	: 1 mW typical
ALC	: ± .5 dB for 10 dB input change
VSWR Tolerance	: can withstand infinite VSWR without shutdown

Protection	: VSWR, over-temperature, overdrive
Stability	: unconditionally stable
Class of Operation	: Class "A" linear
Operation Temperature	: -10 to 40 °C
Connectors	: type N female
Cooling	: forced air, impeller fans.
Front Panel Meter	: 0-200 Watt FS, top scale % limit reflected power SET point, bottom scale
Controls	: [AC LINE] ON/OFF [RF CTRL] ON/OFF (blanking) [METER] FWD/REFL [ALC] FAST/SLOW (Autom. Level Control) [VSWR] RESET MAN/AUTO RF GAIN, ALC
Indicators	: SYSTEM, BLANKING, [METER]MODE, [ALC] MODE, VSWR, TEMP, REMOTE ACTIVE
Remote Control	: provisions standard via 25-pin D-subminiature connector. Optional integral IEEE488.2/RS232 Interface, see below.
Primary Power Required	: 187 to 265 V _{AC} , 47 to 63 Hz, 2800 VA max.
Construction	: two 19-inch rack-mount cabinets. Formed, aluminum construction with removable front, rear and side panels. Front panel controls and indicators are PCB-mounted, except gain and ALC controls and RF connectors. All sub- assemblies are modular and removable.
Color	: Main Cabinet - medium bluish-gray with dark blue trim Front panels - <u>Dominant color</u> - light gray, <u>Graphics background color</u> -- medium bluish-gray <u>Graphics and text color</u> - dark blue Cabinets and covers - clear, chemically treated aluminum
Size (H X W X D)	: 23 X 22 X 31 in; 584 X 559 X 787 mm
Weight (approx.)	: 165 lb.; 75 kg