CUBIC
Enabling a Safer World

- Modular Design
- 5,000 Watts PEP and Average
- 2.0 to 30 MHz
- Automatic Level Control (ALC)
- Operates into VSWRs up to 3:1 with graceful power reduction
- VSWR Protection above 3:1
- Multiband Low Pass Filters
- RS-232/422/485 Interfaces
- Built-in T-4180 Exciter
- FCC Part 87 Certified
- Front Panel Forward and Reflected Power Meters

COM5000-8 POWER AMPLIFIER

THE COM5000-8 IS A HIGH-EFFICIENCY CLASS AB AMPLIFIER WITH THE LINEARITY OF A CLASS A DESIGN.

This amplifier is based on Silicon Power DMOS transistors that are specified for continuous operation (CW) at maximum rated power. The COM5000 is modular in design using basic building blocks in its four power amplifiers of 1.25 kW each. The output of each power amplifier passes through a selectable multiband low pass filter which is then summed by the output combiner.

The amplifier incorporates a sophisticated microprocessor based controller which is used for normal “housekeeping” functions. The built-in T-4180 Exciter has RS-232 and RS-422 interfaces for connection to an external computer for remote control. Built-In Test (BIT) routines continuously monitor conditions within the amplifier and transmit status information upon request.

The COM5000-8 has a built-in exciter (Cubic T-4180) and is FCC Part 87 certified.

Specifications

• Frequency Range	2 to 30 MHz
• Power Output	5,000 watts PEP and average (±0.5dB) with VSWR less than or equal to 1.3:1
• Power Input	< 100mW PEP/average for rated power output
• Input Impedance	50 ohm, 1.5:1 VSWR maximum
• Gain Variation	1.5dB maximum over frequency range
• VSWR Turndown	Operates at reduced power from 1.3:1 to 3:1 VSWR Stable at any load; protected for infinite VSWR
• 3rd Order IMD	>32 dB below PEP
• RF Noise	At least 75 dBc/Hz below a 5 kW output reference level
• Spurious Emissions	-60 dBc or better within ±5% of the operating frequency. At least -80 dBc beyond ±5% from the operating frequency.
• Harmonic Levels	-63 dBc or better at rated power into a 50 ohm load
• Frequency Change Time	20 ms maximum between any two frequencies
• Key Control	RF Power is within ±1 dB of steady state level in less than 10 ms after key ON. RF power is reduced by more than 50 dB within 5 ms after key OFF
• Altitude	Operating: 0 to 10,000 ft Nonoperating: 0 to 50,000 ft
• Temperature	Operating: 0°C to + 40°C at sea level; maximum temperature derated linearly to + 20°C at 10,000 ft Nonoperating: -40°C to + 70°C
• Humidity	0 to 95% relative humidity, non-condensing
• Cooling	Forced air-internal fans.
• Acoustic Noise	73 dBa
• Power Supply	Built in
• AC Line Input	3 phase, 47 to 63 Hz 187-240 VAC at 50A maximum per phase or 373-457 VAC at 25A maximum per phase
• Indicator LEDs	System Controller Power Amplifier Modules Power Supply
• Control	RS-232/422/485 serial bus BIT parameters via serial bus
• Dimensions	85.5” (217cm) (H) x 31.6” (80.3cm) (D) x 23.7” (60.2cm) (W)
• Weight	<800lb (< 363kg)

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