COM5000 POWER AMPLIFIER

- Modular Design
- 5000 Watts PEP and Average
- 1.6 to 30 MHz
- Automatic Level Control (ALC)
- Operates into VSWRs up to 3:1 with graceful power reduction
- VSWR Protection above 3:1
- Multirange Low Pass Filters
- RS-232/422/485 Interfaces
- Adaptable to Customer's Exciter
- Optional Front Panel Meters

The COM5000 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 (BBB) 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. In addition the processor serves as the control interface for an external exciter via an RS-232/422 or 485 serial interface. Built-In Test (BIT) routines continuously monitor conditions within the amplifier and transmit status information upon request.

The COM5000 is designed to be driven by an exciter, can easily be adapted to a customer's specific model and provides status information to the exciter. Space in the cabinet can be provided for the exciter.

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SPECIFICATIONS

Frequency Range:	1.6 to 30 MHz.
Power Output:	5000 watts PEP and average (±0.5dB) with VSWR less than or equal to 1.3:1 Complies with MIL-STD-188-141.
Power Input:	< 100mW PEP, 0mW average for rated power output.
Input Impedance:	50 ohm, 1.5:1 VSWR maximum.
Gain Variation:	1.5dB maximum over frequency range.
VSWR Turndown:	Operate 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 5kW 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 time 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: 0^0C to + 50^0C at sea level; maximum temperature derated linearly to + 20^0C at 10,000 ft Nonoperating: -40^0C to + 60^0C
Humidity:	0 to 95% relative humidity, non-condensing.
Cooling:	Forced air-internal fans.
Acoustic Noise:	55 dBa.
Power Supply:	Built in.
AC Line Input:	3 phase, 47 to 63 Hz 190-250 VAC at 52A nominal; or 342 -418 VAC at 28A nominal: or 375-456 VAC at 27A nominal.
Indicator LEDs:	System Controller Power Amplifier Modules Power Supply
Control:	RS-232/422/485 serial bus ALC to the external exciter BIT parameters via serial bus
Dimensions:	67.25” (170.8cm) (H) x 32.0” (81.3cm) (D) x 22.0” (55.9cm) (W)
Weight:	<800lb (< 363kg)

Specifications subject to change without notice

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CCI 2642 10/10