

COM10000 POWER AMPLIFIER

The COM10000 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 COM10000 is modular in design using basic building blocks (BBB) in its eight 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 COM10000 is designed to be driven by an exciter, can easily be adapted to a customer's specific model or Cubic' T-4180 exciter and provides status information to the exciter. Space in the cabinet can be provided for the exciter.

Modular Design

10,000 Watts PEP
and Average

1.6 to 30 MHz

Automatic Level
Control (ALC)

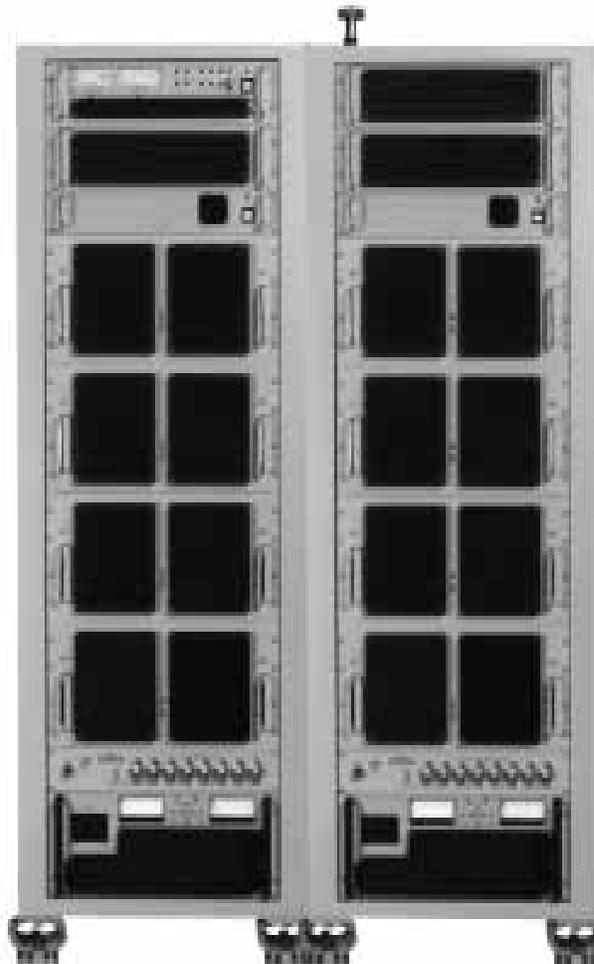
Operates into
VSWRs up to
3:1 with graceful
power reduction

VSWR Protection
above 3:1

Multirange Low
Pass Filters

RS-232/422/485
Interfaces

Adaptable to
Customer's
Exciter



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SPECIFICATIONS

Frequency Range:	1.6 to 30 MHz.	Altitude:	Operating: 0 to 10,000 ft Nonoperating: 0 to 50,000 ft
Power Output:	10,000 watts PEP and average (± 0.5 dB) with VSWR less than or equal to 1.3:1 Complies with MIL-STD-188-141.	Temperature:	Operating: 0°C to + 50°C at sea level; maximum temperature derated linearly to + 20°C at 10,000 ft Nonoperating: -40°C to + 60°C
Power Input:	< 100mW PEP, 0mW average for rated power output.	Humidity:	0 to 95% relative humidity, non-condensing.
Input Impedance:	50 ohm, 1.5:1 VSWR maximum.	Cooling:	Forced air-internal fans.
VSWR Turndown:	Operate at reduced power from 1.3:1 to 3:1 VSWR. Stable at any load; protected for infinite VSWR.	Acoustic Noise:	55 dBa.
3rd Order IMD:	>30 dB below PEP.	Power Supply:	Built in.
RF Noise:	At least 75 dBc/Hz below a 10kW output reference level.	AC Line Input:	3 phase, 47 to 63 Hz 190-250 VAC at 104A nominal; or 342 -418 VAC at 56A nominal; or 375-456 VAC at 54A nominal.
Spurious Emissions:	-60 dBc or better within $\pm 5\%$ of the operating frequency. At least -80 dBc beyond $\pm 5\%$ from the operating frequency.	Indicator LEDs:	System Controller Power Amplifier Modules Power Supply
Harmonic Levels:	-63 dBc or better at rated power into a 50 ohm load.	Control:	RS-232/422/485 serial bus ALC to the external exciter BIT parameters via serial bus
Frequency Change Time:	20 ms maximum between any two frequencies.	Dimensions:	72" (182.9cm) (H) x 32.0" (81.3cm) (D) x 44.0" (111.8cm) (W)
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.	Weight:	<1600lb (< 726kg)

Specifications subject to change without notice

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