

## COM400 POWER AMPLIFIER



### DESCRIPTION

The COM400 is a high-efficiency Class AB amplifier with the linearity of a Class A design. Its driver and two power amplifiers use DMOS transistors. The output from the two power amplifiers is summed by an output power combiner before passing through a selectable, multiband, low pass filter. The unit is rated for PEP and average, at maximum power.

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 COM400 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.

### FEATURES

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| <ul style="list-style-type: none"><li>• Modular Design</li><li>• 400 watts PEP and Average</li><li>• 1.6 to 30 MHz</li><li>• Automatic Level Control (ALC)</li><li>• Operates into VSWRs up to 3:1 with graceful power degradation</li></ul> | <ul style="list-style-type: none"><li>• VSWR protection above 3:1</li><li>• Multirange low pass filters</li><li>• 19 inch rack mountable</li><li>• Built-in power supply</li><li>• RS-232/422/485 interfaces</li><li>• Adaptable to customer’s exciter</li></ul> |
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# COM400 POWER AMPLIFIER SPECIFICATION

## SPECIFICATIONS

Frequency Range:	1.6 to 30 MHz.	Altitude:	Operating: 0 to 10,000 ft Nonoperating: 0 to 50,000 ft
Power Output:	400 watts ( $\pm 0.5$ dB) PEP and average into 1.3:1 VSWR load.	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, 50mW 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 1.5:1 to 3:1 VSWR. Stable at any load; protected for infinite VSWR.	Acoustic Noise:	50 dBa.
3 <sup>rd</sup> Order IMD	>36 dB below PEP.	Prime Power:	115 or 220 VAC, selectable.
RF Noise:	At least 75 dBc/Hz below a 400W CW output reference level.	Front Panel Indicators:	VSWR fault and Over temperature fault
Spurious Emissions:	-60 dBc or better within $\pm 5\%$ of the operating frequency. At least -80 dBc beyond $\pm 5\%$ from the operating frequency.	Control:	RS-232/422/485 serial bus ALC to the external exciter BIT parameters via serial bus.
Harmonic Levels:	-63 dBc or better at rated power into a 50 ohm load.	Dimensions:	10.5" (26.7cm) (H) x 22.0" (55.9cm) (D) x 19.0" (48.3cm) (W)
Frequency Change Time:	20 ms maximum between any two frequencies.	Weight:	60lb (27.2kg)
Key Control Time:	RF Power is within $\pm 1$ 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.		