



T&C

Power Conversion

ULTRA 06 800 LF AMPLIFIER



T&C POWER CONVERSION

Industry Leader in Output Pulsing, Up to 400 Watts RF Power From 20 kHz to 1MHz Designed for Rugged, conservative space requirements, robust easy to operate, and covers wide frequency range in one package.

Featuring:

- **50 kHz to 800 kHz up to 500 watts CW Mode into 50 ohm load**
- **Input and Output Impedance 50 Ohm**
- **No Front Panel Controls**
- **Rear Panel Hardware connections for BNC Female input and output, Blanking Control, Remote Control, AC Input Connectors, AC Switch and Indicator, Safety Ground Stud, Safety Labels, and Remote Control Label.**

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The Model ULTRA 06-800 Class-B power amplifier features state of the art solid state, air cooled RF power source expressly designed for use in ultrasonic and gas plasma applications. The amplifier utilizes conservatively rated solid state components and automatic power control circuitry to ensure reliable and continuous performance. Completely self-contained, the ULTRA 06-800 provides all of the control and monitoring functions needed in a state-of-the-art power amplifier, which will provide up to 500 W continuous output into a 50 Ohm load.

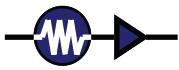
OPERATION

The ULTRA 06-800 is a rack mounted laboratory amplifier with uncomplicated features. On the bottom of the rear panel is the AC line power ON / OFF switch.

This heavy-duty double pole switch connects and disconnects the hot and neutral power line connections. The amplifier is shipped from the factory capable of 100 - 120, 200 - 240 VAC, +/-10% operation. The amplifier has Type "BNC" RF coaxial connectors on the rear panel for easy connection of the signal source, load, and for blanking. The user must make sure that connecting cables to the output are also the 50-Ohm type to keep the output power from being reflected back to the amplifier due to cable impedance mismatch. High quality RF cable for connection to the load is highly recommended.

Forward and Reversed RF power is continuously measured so the power will not exceed set forward and reverse limits.

APPLICATIONS—ULTRASONICS - GAS PLASMA—LABORATORY



ULTRA 06-800 Specifications



Class Of Operation

Class B

Frequency Of Operation

20 kHz to 2 MHz

RF Power Output

50 Ohm load:

Up to 250W for 20 kHz to 2 MHz

Up to 400W for 20 kHz to 1.0 MHz

Up to 550 W for 50 kHz to 800 kHz

Pulse and low duty cycle!

Any load:

Up to 250W, continuous operation.

Gain

57 dB @ 500W / 0.5 MHz set point

±1.5 dB 30 kHz to 800 kHz

RF Input Drive for AGC

Recommended - 2 dBm to 0 dBm

RF Input Drive

- 15 dBm to 0 dBm typical range,

Up to + 3 dBm max.

Input Drive Source

Signal or function generator, analog

computer input capable of up to 2

Vp-p @ 50 Ohm

Input and Output Impedance

50 Ohm

(Optimized for 50 Ohm !)

Input VSWR

2:1 max

Output VSWR

3:1 max

Output VSWR Protection

100 W max reflected power limit

Harmonic Level @ 300W

-17 dBc or better for 3-d

- 22 dBc or better for any other

Harmonic Level @ 100W

- 17 dBc or better for 3-d

- 22 dBc or better for any other

Spurious Output

-50 dBc equivalent noise level generated by internal circuits

Output Blanking

ULTRA 06-800

amplifier offers blanking of the output signal for minimum noise RF spectrum.

"T off" time ≤ 10 μs,

"T on" time ≤ 10 μs

TTL Low - RF Output Blanked,

TTL High - RF Output present, normal operation.

BNC Female connector. Back Panel

RF Connectors

BNC Female: Back Panel

Third Order Intercept

+57 dBm

Panels

Front: blank panel, air intake. Marking: company name, product number.

Back: air exhaust. Hardware location for RF IN, RF OUT, Blanking Control, Remote Control and AC Input connectors, AC Switch and Indicator, Fan Guard, Safety Ground Stud. Markings: safety labels, GND and AC Line Table, Serial Number and Remote Control Label.

AC Input Current (RMS)

RF Out max 550W:

100-120 V ac, 50-60 Hz, 11 A

200-240 V ac, 50-60 Hz, 5.5 A

AC Power Connection

IEC Standard Power Entry followed RFI filter.

Filter range 0.1 to 30 MHz minimum

Cooling

Forced air, temperature controlled.

Dimensions

H135mm x W211mm x L368mm

+/- 2 mm

H 5.25" x W 8.3" x L 13.5"

+/- 0.1"

Weight

12.7 kg (28 lbs.)

Mounting

1/2 Rack Mount Unit.

Operating Temperature

Temp.: 0° to 40° C ambient

Humidity: 80%

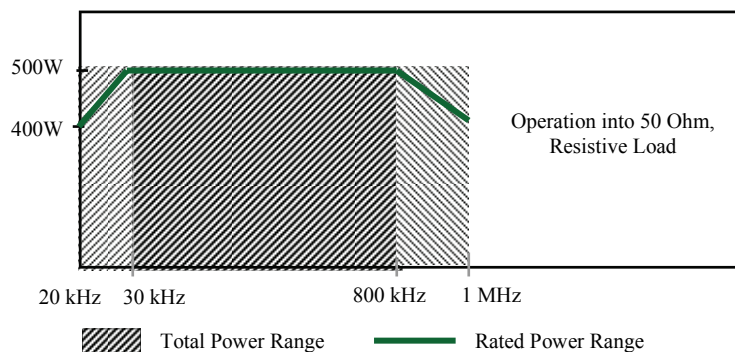
Equipment intended for ISM applications in laboratory and light industrial environment.

Designed and tested to meet

EN / UL 61010-1:2001

Self Certified

ULTRA 06-800 Performance Chart



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