



T&C

Power Conversion

ULTRA 06 800 MQ LF AMPLIFIER



T&C POWER CONVERSION

Industry Leader in Output Pulsing, Up to 400 Watts RF Power From 550 kHz to 950 kHz
Designed for Rugged, conservative space requirements, robust easy to operate, and covers wide frequency range in one package.

Featuring:

- **550 kHz to 950 kHz up to 400 watts CW Mode into 50 ohm load**
- **Input and Output Impedance 50 Ohm**
- **Front Panel Meter Selection**
- **Rear Panel Hardware connections for BNC Female input and output, Analog DB15 Interface, AC Input Connectors, AC Switch and Indicator, Safety Ground Stud, Safety Labels, and Remote Control Label.**



The Model ULTRA 06-800 MQ 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 MQ provides all of the monitoring functions needed in a state-of-the-art power amplifier, which will provide up to 400 W continuous output into a 50 Ohm load.

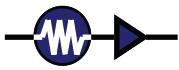
OPERATION

The ULTRA 06-800 MQ 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, $\pm 10\%$ operation. The amplifier has Type "BNC" RF coaxial connectors on the rear panel for easy connection of the signal source, load. 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 MQ Specifications



Class Of Operation

Class B

Frequency Of Operation

550 kHz to 950 kHz

RF Power Output

50 Ohm load:
Up to 400W

Any load:

Up to 250W, continuous operation.

Gain

55 dB @ 350W / 0.85 MHz set point
±0.75 dB 550 kHz to 950 kHz

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

80 W max reflected power limit

Harmonic Level

350W, 750kHz—950 kHz:
Better than -35 dBc for 3-rd harmonic,
any other better than -28dBc.
350W, 550kHz—750 kHz:
Better than -25 dBc for 3-rd harmonic,
any other better than -17dBc.

Spurious Output

- 50 dBc equivalent noise level
generated by internal circuits

Output Blanking / Pulsing

ULTRA 06-800 MQ (Pin 14, DB15)
amplifier offers blanking of the output
signal for minimum noise RF
spectrum.

"T off" time < 3 μs,

"T on" time < 5 μs

TTL High - RF Output Blanked,
TTL Low - RF Output present, nor-
mal operation.

RF Connectors

BNC Female: Back Panel

Third Order Intercept

+57 dBm

AC Input Current (RMS)

RF Out max 450W:

100-120 V ac, 50-60 Hz, 10 A

120 V ac, 8.2 A

200-240 V ac, 50-60 Hz, 5 A

230 V ac, 4.5 A

Panels

Front: LED display, display switch,
LED, air intake. Marking: company
name, product number.

Back: air exhaust. Hardware location
for RF IN, RF OUT, Analog DB15,
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 Power Connection

IEC Standard Power Entry followed
RFI filter.

Filter range 0.1 to 30 MHz mini-
mum

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.

Environmental conditions

Temp.: 0° to 40° C ambient

Humidity: 80%

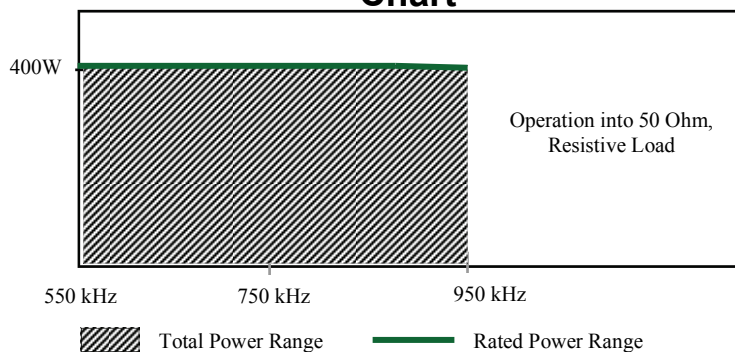
Equipment intended for ISM applica-
tions in laboratory and light industrial
environment.

Designed and tested to meet

EN / UL 61010-1:2001

Self Certified

ULTRA 06-800 MQ Performance Chart



T&C Power Conversion, Inc.

110 Halstead Street, Suite 7

Rochester, NY 14610, USA

Tel: 585-482-5551

Fax: 585-482-8487

www.tcpowerconversion.com

sales@tcpowerconversion.com