



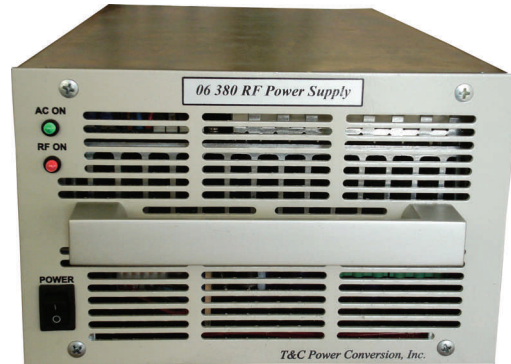
**T&C**  
Power Conversion

# 06-380 RF POWER SUPPLY

Up to 500 Watts RF Power From 380 kHz For Laboratory and Industrial Application.

## FEATURING:

- 380 kHz up to 500 Watts
- Low distortion level @-40 dBc
- Measuring forward, reflected and power VSWR simultaneously
- Back Panel Control & Monitoring of all Generators functions.
- Data acquisition: Status Monitoring & Power Measurement at Analog Port
- AGC or Power Leveling: Gain Control to better than  $\pm 0.5$  dB
- Pulse and Sweep of Internal RF oscillator



*Power Supply  
Front Panel view*

RF Power Supply Model 06-380 is a dynamic source of RF power for ultrasonic, laser modulation, RFI/EMI, plasma generation, general laboratory and industrial applications.

Featuring leading edge solid state design for all generator stages and a built-in crystal oscillator signal source, it provides everything for a complete and reliable, finely controlled RF power delivery system. It reflects the T&C ongoing commitment to provide RF power products of the highest quality, incorporating the current requirements for complete remote control and data acquisition features.

### OPERATION

The model 06-380 produces 500W of RF Power at a frequency of 380 kHz, with low harmonic distortion.

Power readings are calibrated into a 50 Ohm Load and they are accurate when unit operates into matched load. Outside of matched condition, the model 06-380 power measurement system provides an accurate reading on VSWR. High level VSWR is also monitored for protection of output stage and is set for 80W limit. When used as an amplifier, the

06-380 is compatible with most signal and function generators, computer synthesizer cards and it accurately reproduces all waveforms within its control loop bandwidth conditions.

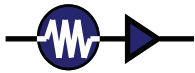
The Forced-air cooling system and the internal power supply are designed to permit operation over a wide range of temperature and global AC line conditions. The 06-380 is built to withstand a +3 dBm input signal. The unit amplifies the inputs of AM and pulse modulations.

### OUTPUT PROTECTION

The Model 06-380 is protected by its internal monitoring system for 500 Watts of total Forward Power and 80W of Reflected Power. This will protect the RF power supply output stage from extreme mismatch at the Output.

### GENERAL

T&C's products are designed to be reliable, compact and light in weight. The use of conservatively rated components ensures high reliability and eliminates the need for periodic retuning.



# 06-380 RF Power Supply Specifications

## Class Of Operation

Class B

## Frequency Of Operation

380 kHz (+/- 5kHz)

## Frequency Stability

0.005% or better

## RF Power Output

500 Watts nominal into 50 Ohms

## Operation as amplifier. Contact T&C for further details.

### Output as amplifier in MGC/Burst Mode

0 dBm IN, 1V (5 or 10V) CTL IN pin 5  
100W +/-2W

NOTE! Scale for MGC is not linear.

### RF Input Drive (as amplifier)

Typical range -20 dBm to 0 dBm  
1V (5 or 10V) CTL IN pin 5

### RF Input Drive for AGC

Recommended +0 to +3 dBm for the best operation

### Input Drive Source(amplifier)

Signal or function generator, analog computer input capable of up to 2 Vp-p @ 50 Ohm

### Internal RF Source

Crystal oscillator at 380 kHz +/-5 kHz

### Input and Output Impedance

50 Ohm

### IN / OUT VSWR

1.2:1 max - input  
3:1 max - output

### Output VSWR Protection

80 Watts max reflected power limit. Automatic, limits typically within 0.5 ms after reverse power reaches 80 Watts or power amplifier current preset limit.

## Harmonic Level @ 500W

Better than - 40 dBc

## Spurious Output

- 50 dBc

## Output Blanking

For pulsed applications, T&C amplifiers and generators offer blanking of the output signal for minimum noise RF spectrum

## Dynamic Power Range

1 to 500W, settings within +/- 3W  
NOTE! Output cutoff below 1W.

## Output Settings & Control (Communications)

SubD 25 Analog and Digital I/O .

1V=100W default,  
5V=full power or  
10V=full power.

D-COM "Digital Communication" Port: (Optional)

RS-232  
RA-485  
USB

## Pulse Specifications

Pulse Width from 2  $\mu$ s to continues, user defined.

## RF Power Margin

(Open Loop Max Power/Rated Power)-1)\*100  
20 %

## RF Connectors

INPUT BNC Female  
OUTPUT N Female  
BLANKING BNC Female  
Rear Panel

## AC Power Source

200 to 240 VAC, +/- 10%, 50 - 60 Hz  
broad input voltage, with no adjustment required

## AC Power Connection

IEC Standard Power Entry followed by RFI filter.  
Filter range 0.1 to 30 MHz min.

## AC Circuit Protection

Internally fused on the main DC Power Supply, 15A.

## AC Input Current (RMS)

**RF Out 500W:**  
200 to 240V ac, 9 A

## Cooling

Forced air, temperature controlled, heatsink temperature monitored for equipment safety at 70C limit.

## Dimensions

H135mm x W211mm x L394mm  
( 5.25" x 8.3" x 15.5" )

## Weight

14.5 kg, 32 lbs.

## Case

Front Panel: T&C White - Powder Coated Steel.  
Stainless Steel Covers and Chassis.  
Chassis designed to meet EMI RFI shielding requirements

## Mounting

Half Rack, 3U high.

Optional: Rack Mount Kit, Adapter Kit, Coupling Screws.

## Environmental conditions

**Temp.:** 10° to 40° C ambient  
**Humidity:** 80%

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



# AG 06-380 Specifications

PA Output: Chebyshev 3-th order + reflectometer. Impedance matched into 50 Ohm resistive load.

**T ambient = 25C**

**PA configuration: double push-pull**

V dc = 46.1V,

Heatsink: copper L=7", W=8.15" (for half rack chassis),

