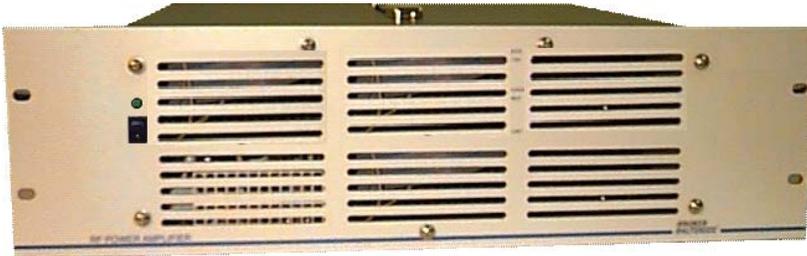


1213



RF POWER SUPPLY



Facts:

- 1200 W @ 13.56 MHz,
- H135mm x W224mm x L445mm, 19" Rack, 3U high, 14 kg, 31 lbs
- Forced air cooling,
- 200 to 240 VAC, +/- 10%, 47 - 63 Hz

1200 Watts RF Power at 13.56 MHz for Industrial and Laboratory Applications.

FEATURING:

- 13.56 MHz up to 1200 Watts in peak power
- Low harmonic level at 1100W $h_2 \leq -45$ dBc, h_3 and higher < -55 dBc
- Measuring forward, reflected and power VSWR simultaneously
- Back Panel Control & Monitoring of all Generators functions. Data acquisition: Status Monitoring & Power Measurement via Analog Port
- AGC Power Leveling: Output Power Control to better than ± 10 W of set value.
- Pulse operation in MGC/ Burst mode

RF Power Supply Model 1213 is a robust source of RF power for laser modulation, plasma generation, general laboratory and general 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, 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 1213 produces 1200W of RF power at a frequency of 13.56 MHz, with low harmonic distortion.

Power meters are calibrated into a 50 Ohm Load and they are accurate when unit operates into matched load. Outside of matched condition, the model

1213's power measurement system provides an accurate reading of VSWR. High level VSWR is also monitored for protection of output stage and is set for 8:1 limit.

When used as an amplifier, the 1213 is compatible with most signal and function generators, computer synthesizer cards and it accurately reproduces all waveforms within its control loop bandwidth limits.

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.

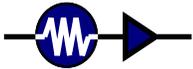
The 1213 is built to withstand a +3 dBm Input signal. The unit amplifies the inputs of AM, narrow band FM and pulse modulations.

OUTPUT PROTECTION

1213 is protected by its internal monitoring system for 1200 Watts of total Forward Power and 240 W of total Reversed Power. REV automatic foldback reduces output power depending on the level of the actual VSWR.

GENERAL

T&C generators are designed to be reliable. The use of conservatively rated components ensures high reliability and eliminates the need for periodic retuning.



1213 RF Power Supply Specifications

Class Of Operation

Class C

Frequency Of Operation

13.56 MHz

Frequency Stability

0.005% or better

RF Power Output

1200 Watts into 50 Ohm nominal

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

Output as amplifier in MGC/Burst Mode

0 dBm IN, 10V CTL IN pin 5
1000W +/-10W

Note: Scale for MGC is not linear.

RF Input Drive for AGC

Recommended +0 dBm +/- 1.5 dB
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 13.56 MHz

Input and Output Impedance

50 Ohm

IN / OUT VSWR

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

Output VSWR Protection

240 Watts max reflected power limit.
Automatic foldback limit with [W]
level of protection depending on ac-
tual VSWR of a load connected.

Harmonic Level @ 1100W

Better than - 45 dBc for 2-nd
harmonic, any other > -55 dBc

Spurious Output

- 55 dBc noise level

Output Blanking

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

Dynamic Power Range

10 to 1200W,
settings within +/- 10W

Output Settings & Control (Communications)

SubD 25 Analog and Digital I/O .
Port power scale 1V=100W. Rear
Panel

Pulse Specifications

Pulse Width from 2 μ s to contin-
ues, user defined.

RF Power Margin

(Unlimited Max Power Available / Rated Power)-1)*100
30 %

RF Connectors

INPUT BNC Female
OUTPUT N Female
BLANKING BNC Female
Rear Panel

AC Power Source

200 to 240 VAC, +/- 10%,
47 - 63 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 (2 x) main
DC Power Supply, (2 x) 15A.

AC Input Current (RMS)

RF Out 1200W:
 $I \leq 10A @ 220V$

Cooling

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

Dimensions

H135mm x W224mm x L445mm
(5.25" x 16.6" x 17.5)

Weight

14 kg, 31 lbs.

Mounting

19" Rack, 3U high. Optional: Rack
Mount Kit, Adapter Kit, Coupling
Screws.

Environmental conditions

Temp.: 10° to 35° C ambient

Humidity: 80%

Equipment intended for ISM appli-
cations in laboratory and light in-
dustrial environment.

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