

AG 1013

RF GENERATOR / AMPLIFIER

This is an *air-cooled* 13.56 MHz plasma generator up to 1000W, ideal for Industrial/Scientific/Medical applications



▲ AG 1013 (front and rear panels)



▲ complete RF system (AIT-600R matching network and AG 1013 generator)

Features

Digital display: Forward / Reflected / Load Power, Internal Temperature, Tuner Cap Positions

Interfaces: Analog / Digital, RS-232, RS-422

Works with any matching device/ tuner, but is uniquely optimized with T&C's AIT-600R tuner series (*shown bottom left*)

Complete control of generator and AIT-600R tuner via front panel or PC (GUI software)

Data acquisition: Power measurement and status monitoring at analog interface

Operation: AGC Power Leveling, Low Harmonic Level, Pulse Operation, Ramping Profiles

5.25" H x 16.5" W x 16.00" L (Rack mount, or Stand-alone)

Ordering Options

AG 1013 (generator only)

AG 1013 & AIT-600 R Tuner (optimized complete RF delivery system)

User-defined safety standard approved power plug

[Rear panel] RF Input / Blanking ports
or CEX In / Out ports

AG 1013 Spec Sheet

Class Of Operation

Class C/D

Frequency Of Operation

13.56 MHz

Frequency Stability

0.005% or better

RF Power Output

1000 Watts nominal into 50 Ohms

EXT RF Input Drive for AGC

+0 to +3 dBm for best operation

Input Drive Source for

External RF Input

Signal or function generator, analog computer input capable of up to

2 Vp-p @ 50 Ohm

CEX Input (*Common Exciter*)

3Vp-p to 8Vp-p at 13.56 MHz

CEX Output (*Common Exciter*)

3Vp-p to 8Vp-p at 13.56 MHz

(CEX available upon request)

Internal RF Source

Crystal oscillator at 13.56 MHz ,
0.005% stability

Input and Output Impedance

50 Ohm

IN / OUT VSWR

1.2:1 max - input

3:1 max - output

Output VSWR Protection

200 Watts max reflected power limit

(Automatic limit within 0.5ms)

Harmonic Level @ 600 W

> -50 dBc for 2nd harmonic

> -55 dBc all others

Spurious Output

-55 dBm equivalent noise level at RF
Out.

RF Output Stability

Unconditionally stable up to 10:1
VSWR, any angle, any load.

Dynamic Power Range

1 to 1000 W, settings within +/- 1W

Scale

1 - 10V , user selectable

Pulse Operation

Pulse width: 1 ms – 9995 ms

Controlled via front panel and GUI

Ramp Operation

Ramp speed: 1 W/s – 99 W/s

Controlled via front panel and GUI

Controls & Communications

Analog ports: SUBD-25 (rear panel)

Digital ports: RS-232, RS-422, USB
2.0 (rear panel)

RF Connectors

RF Input: BNC female

Blanking: BNC female

CEX In/Out: BNC female*

RF Out: N female

Rear Panel

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)

200-240 V ac, 50-60 Hz, 12 A

Cooling

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

Case

- Front Panel: Plastic Overlay Coated
Steel

- Aluminum Covers and Chassis

- Chassis designed to meet EMI RFI
shielding requirements

- 5.25" H x 16.5" W x 16.00" L

Full Dimensions

L 18.0" x W 16.25" x H 5.25"

(L 457 mm x W 412.75 mm x H 133.5
mm)

Weight

14.2 kg, 31 lbs.

Mounting

Full Rack, 3U high

*(Optional: Rack Mount Kit, Adapter
Kit, Coupling Screws)*

Environmental conditions

Temp.: 0° to 40° C ambient

Humidity: 80%

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

* - Units with Common Exciter (CEX)
function

