



RFG500-380kHz High Efficiency RF Generator 500 Watts 380kHz



The low frequency range of RF generators are precision units intended for scientific and industrial applications. Their robust construction using the latest in switch mode and solid-state design techniques ensure a long and trouble free life even in harsh environments.

The small size of the unit makes it ideal for use where there is restricted rack space.

It is recommended that the generator be used in conjunction with either a manual or

automatic impedance matching network.

The main features of all models are:

- Efficient Class-E design
- 1/2 rack, 2U (89mm) high
- Microprocessor display of incident (forward) power, reflected power and unit status
- Precision power control +/- 1% of set point.
- Fast pulse operation from TTL/CMOS input.

The output power of each generator is fully adjustable between zero and maximum power. The feedback control system ensures that the set output power remains constant and repeatable. Incident (forward) and reflected power measurements are internally calibrated to give high accuracy throughout the power range.

An external voltage of 0 to 5Volts can be used to control the output. This is particularly useful in sputter coating applications where the D.C. voltage developed across the plasma dark space can be regulated rather than the RF power.

Technical Specifications - Low Power RF Generators

Model RFG500-380

Class of operation

Class E

Output frequency

380kHz fixed frequency
from internal source

Output power

500Watts into 50 ohm load

Frequency stability

Crystal controlled:
380kHz +/-38Hz

Output impedance

50Ω

Output connection

N type/50Ω

Power control

Analogue control system
allows power or external
feedback control. Output
stability is +/-1% for +/-
15% variation in line.

VSWR capability

Can withstand any VSWR
at any phase angle

Harmonic output

Better than 40dB below
fundamental

Output envelope ripple

Less than 1% of full
amplitude

Pulse operation

TTL input via SMA socket
on rear panel.

Minimum pulse width
40μs, with a recommended
pulse-on duty cycle from
1% to continuous (100%
duty cycle.)

Front panel power meters
automatically display pulse
output levels by utilising
sample/hold technology

Front panel controls

RF on
RF off
Output power set
Pulse/CW switch
Menu switches

Front panel indicator

RF power on
RF power off

Front panel display

Vacuum fluorescent
display showing:
Forward (Incident) Power
Reflected Power
Reflected power exceed
limit
Remote operation
Timer
Cooling interlock
External interlock
AMN display (option)

Rear panel

switches/connectors

Remote connector (25-way
'D')
Common exciter
output(SMA)
Common exciter
input/external signal
source(SMA)(max.
13dBm)
Pulse input connector
(SMA)
Line input (I.E.C.)
AMN display(option)
RF output connector
(N50Ω)
Mains switch
Remote control
Accessed via rear panel
25-way'D' type socket
indicators:

RF on/off (open collector
100mA)
Incident power
Reflected power
RF on/off (contact closure)
Interlock (contact closure)
Output set 0-5Volts = 0-
100%
Remote output set select
External feedback
Remote RF on/off select
True power control select

Cooling

Forced air - air intake
through rear, exhaust
around chassis cover

Line

110/230 VAC single-phase
50/60Hz

Size

1/2rack mounting 2U high
500mm deep (external
connectors may protrude
an extra 50mm)

Weight

8kg

Finish

Front Panel -RAL7135 light
grey
Rear Panel - Stainless
Steel
Cover - Stainless Steel

Environment

Operating temperature:
0-40°C (-20° to +65° C
storage)

Standards

EN61000-3-2:2006
EN6100-3-3/A2:2005
EN61326-1:2006
EN61010-1:2001

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