



RFG1K-380kHz High Efficiency RF Generator 1000 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
- 19-inch 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 RFG1K-380

Class of operation

Class E

Output frequency

380kHz fixed frequency from internal source

Output power

1000Watts 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.

Meters

Vacuum fluorescent display showing incident (forward) power, reflected power, unit status. AMN Tune and load display option.

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

Reflected power exceed limit

Remote operation

Cooling interlock

External interlock

Rear panel

switches/connectors

Remote connector (25way 'D')

Pulse input connector (SMA)

Line input (I.E.C.)

RF output connector (N-type 50Ω)

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

19-inch rack mounting 2U high 500mm deep

(external connectors may protrude an extra 50mm)

Weight

18kg

Finish

Front Panel -RAL7135 light grey

Rear Panel - Stainless Steel

Cover - Stainless Steel

Environment

Operating temperature: 0-35°C (-20° to +65° C storage)

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