

HR-601

RF GENERATOR

HALF RACK

CE MARKED

SET POINT RAMPING

HIGH SPEED PULSING

INTERNAL DC SWITCHER

AGILE FREQUENCY TUNING

CEX W/ DIGITAL PHASE SHIFTER



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PRODUCT DESCRIPTION

The Seren HR-601 is a third-generation, 600 Watt RF Generator. It may be purchased at frequencies of 1.7 - 2.1, 13.56, 27.12 and 40.68 MHz. This lightweight, Air-cooled ½ rack unit is designed to exceed the most stringent vacuum processing demands. The HR-601 can be used as the sole source for plasma generation, as a Bias generator, or as one of several generators in a multiple generator configuration. The front panel controls and indicators are logically grouped, with operational status shown on the front panel four line fluorescent display.

Seren "HR 601" incorporates a separate Control exciter and Power Amplifier boards. Surface mount technology is used extensively on all printed circuit boards. The RF amplifier is powered by a switch-mode power supply.

Seren "HR Series" products utilize LDMOS in the power amplifier stages. The unit operates in a class AB mode providing power accuracy and stability across the entire power range.

RATING

The HR-601 power amplifier is rated at 42% of its actual design capability.

PROTECTION

Seren generators are protected against excessive Voltage Standing Wave Ratio (VSWR) conditions by limiting reflected power, power amplifier current, and power amplifier transistor dissipation.

AGENCY COMPLIANCE

CE: EN61326-6-1, EN55011, EN60950-1
SEMI: S2, S8, S47

NRTL: UL61010-1:2012,
CAN/CSA 22.261010.1:2012
FCC: Part 15, Part 18

CONTROL INTERFACES

The HR-601 is a microprocessor controlled, solid-state RF generator. This product can be controlled by: (1) a selectable serial RS-232/485 interface, (2) a 25 pin D-sub analog interface connector, (3) Optional Remote Controller as well as optional interfaces such as DeviceNet, Profibus, Ethernet and MODBUS.

POWER CONTROLS

The Seren HR-601 can regulate its power output utilizing the following control modes: DC Voltage, RF Voltage, Current, Forward Power Leveling, and Load Power Leveling.

The HR-601 is capable of 2 modes of high speed pulsing: programmable pulsing via internal controls (rate and duty cycle); and analog pulsing, where the generator tracks an incoming pulse train.

The HR-601 agile frequency-tuning feature can be controlled either internally or by an external control signal.

WARRANTY

Seren products are warranted against defect for a period of (15) months from date of shipment.

SERVICE

Seren IPS products are supported by a World-Wide Network of qualified service engineers. Consult our web page for locations in your area.

MODEL	HR601
Forward Power Output	600 Watts
Frequency	1.7-2.1, 13.56, 27.12, 40.68 MHz
Forward Power Accuracy	+/- 2 %
Harmonics	-50 dBc
Input Power	95-125 VAC or 190-264 VAC, 47-63 Hz, 1 Phase
Output Connector	Type "N" Female
Standard Interface Connectors	Serial: DB-9 Female; Analog: DB-25 Female
Pulsing	10 micro sec. / min. pulse
Cooling Requirements	Forced Air
Dimensions	5.19 H x 8 W x 19.63 D (13.18 X 20.32 X 49.86 cm)
Weight	18 lbs. (8.16 kg)