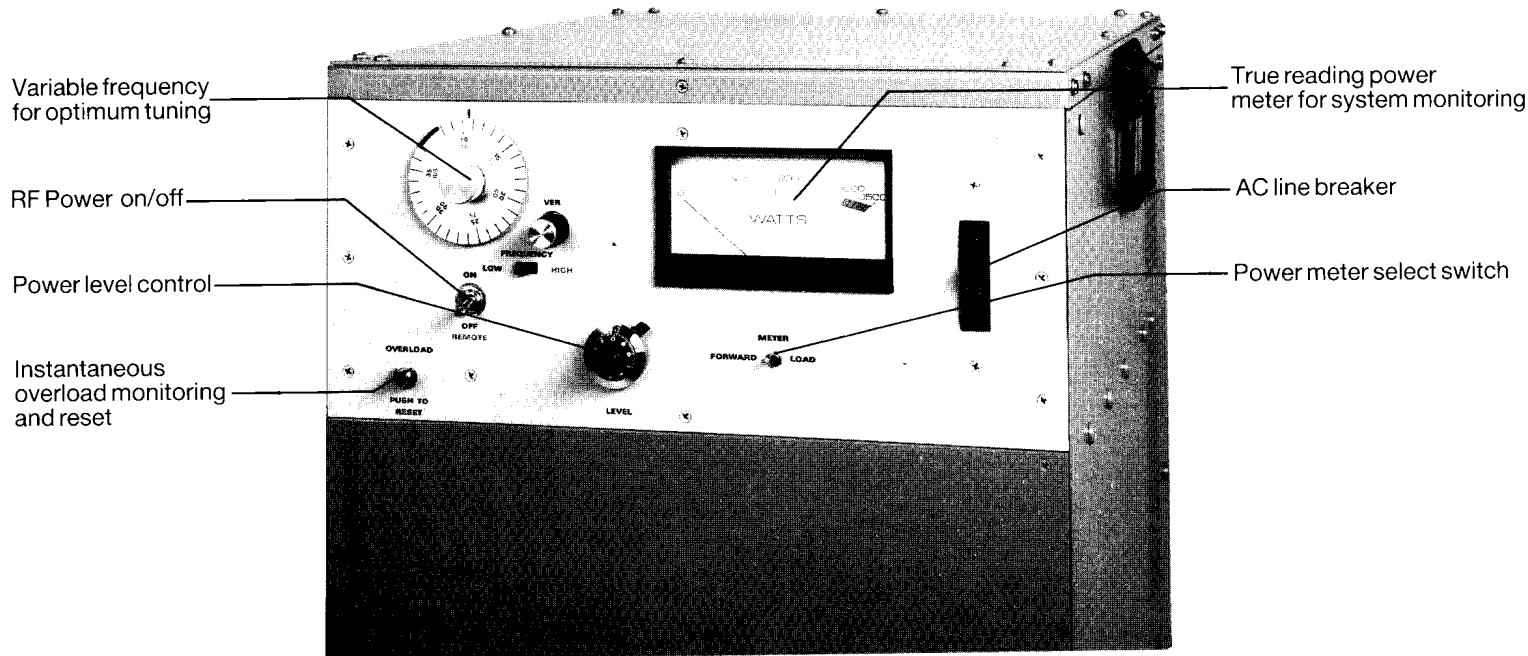


EGR B SERIES

The EGR B Series power generators are extremely versatile sources of high frequency energy designed for induction heating, ultrasonics, plasma discharge and general purpose industrial applications. This series consists of five generator models that provide power outputs from 800 watts to 8 kilowatts and cover the frequency range of 8 to 111 kHz.



INTRODUCTION

In the past, the generation of high frequency RF power has been accomplished through the use of vacuum tubes. The development of bipolar and MOS transistors capable of handling relatively large amounts of RF power in an efficient and controlled manner has paved the way for the development of modern power generators based on transistor technology. The EGR B Series generators combines this solid state technology with "hybrid coupling" of transistor stages to provide a high degree of operational reliability.

VERSATILITY

Generator frequency and power output are continuously adjustable from the individual front panel controls. Power output is monitored by a true reading power meter with an accuracy better than $\pm 2\%$ of full scale.

This meter facilitates proper load impedance matching by measuring both the forward power leaving the generator and the power being absorbed by the load. An optimum match can be achieved by adjusting the impedance matching network until the maximum load power is observed.

These all solid state generators are designed to operate with a wide variety of accessories which makes them ideal for use in plasma discharge, induction heating (metalization) and ultrasonic applications.

GENERATOR PROTECTION

All EGR B Series generators are fully protected against damage due to mismatch or overload and incorporate an integral slow-air system for ducting cool air through the transistor heat sinks. Thermostatic protection provides automatic shutdown should the power transistors overheat due to load mismatch or cooling system failure.

RELIABILITY

The reliability of an RF power generator is directly dependent on the forethought given to its design. The generator should be protected from damage due to any external load impedance, from excessive voltage or current conditions and from overheating. In addition to these more obvious requirements, a highly reliable generator should also incorporate design redundancy to provide a "fail soft" capability. By this we mean that failure of any one power transistor (a remote possibility) should not impair the ability of the other power transistors to continue to supply power. In the EGR B Series this is accomplished by our exclusive "hybrid coupling" technique. Failure of any one transistor power stage results only in a proportional decrease in output and not a total loss of power.

Lastly, all EGR B Series generators are 100% solid state and conservatively designed to provide reliable operation under continuous service conditions.

ADDITIONAL FEATURES

While these generators are extremely reliable, they are also designed for ease of service and maintenance. The use of an all solid state design provides for compact and lightweight construction. The use of low voltage transistors and extensive safety features protect maintenance personnel from contact with hazardous potentials normally present in units utilizing vacuum tubes. Plug-in modules, socketed transistors and integrated circuits facilitate easy maintenance or repair.

The possibility of radio frequency interference problems has been minimized in the design of these generators. Extensive use of RFI/EMI filtering and shielding, plus the relatively low operating frequencies of the generators eliminates the possibility of RF interference problems with associated equipment circuitry. High voltage regulators eliminate spikes and hash present on industrial power lines and prevent interference from reaching the AC line.

ENGINEERING ASSISTANCE

Should you require assistance in integrating these generators into your equipment, our Technical Sales Staff is always available for assistance. Naturally this is without obligation.

Frequency	Generator Model	Maximum Power Output	Power Meter Full Scale	Maximum Reflected Power	Size H X W X D	Weight	Power Requirements (50–60 Hz)
8–111 kHz	EGR800B	800 watts	1000 watts	200 watts	8.75x12x18.75 in 220x305x476 mm	33 lbs 15 kg	115 Vac \pm 8% at 20 amps max
	EGR1600B	1600 watts	2000 watts	500 watts	8.75x17x20.25 in 220x432x514 mm	53 lbs 24 kg	115 Vac \pm 8% at 35 amps max
	EGR3200B	3000 watts	3500 watts	700 watts	26.5x17x22.5 in 673x432x559 mm	145 lbs 60 kg	230 Vac \pm 8% at 35 amps max
	EGR4800B	4000 watts	5000 watts	1000 watts	22x28.75x33 in 560x730x840 mm	150 lbs 68 kg	208 Vac \pm 8% 3 phase at 35 amps max
	EGR9600B	8000 watts	10,000 watts	1500 watts	44x29x33 in 1120x740x840 mm	350 lbs 159 kg	208 Vac \pm 8% 3 phase at 80 amps max

MISMATCH PROTECTION

Cannot be damaged by any external load impedance from an open to a short circuit. Automatic shutdown at maximum reflected power.

FREQUENCY STABILITY

Better than 0.1% frequency stability from 0–45°C ambient temperature after 5 minutes warm-up.

FREQUENCY RESOLUTION

Better than \pm 2Hz using frequency vernier.

ACCESSORIES

Rack mounting kit supplied with EGR800B & EGR1600B. An optional slide kit is available for the EGR3200B.

Coaxial cable for output connection is available as required, with type N or BNC connectors.

POWER CONTROL

Front panel ten turn potentiometer from zero to maximum power (rear panel 0 — 10 Vdc remote level control optional).

POWER METER

Meter accuracy is better than \pm 2% of full scale. Front panel switch permits selection of forward or load power.

THERMAL PROTECTION

Thermostatic protection provides automatic shutdown if transistors overheat due to mismatch or cooling system failure.

Operating Temperature 0 to 45°C.

WARRANTY

One year on all parts and labor.