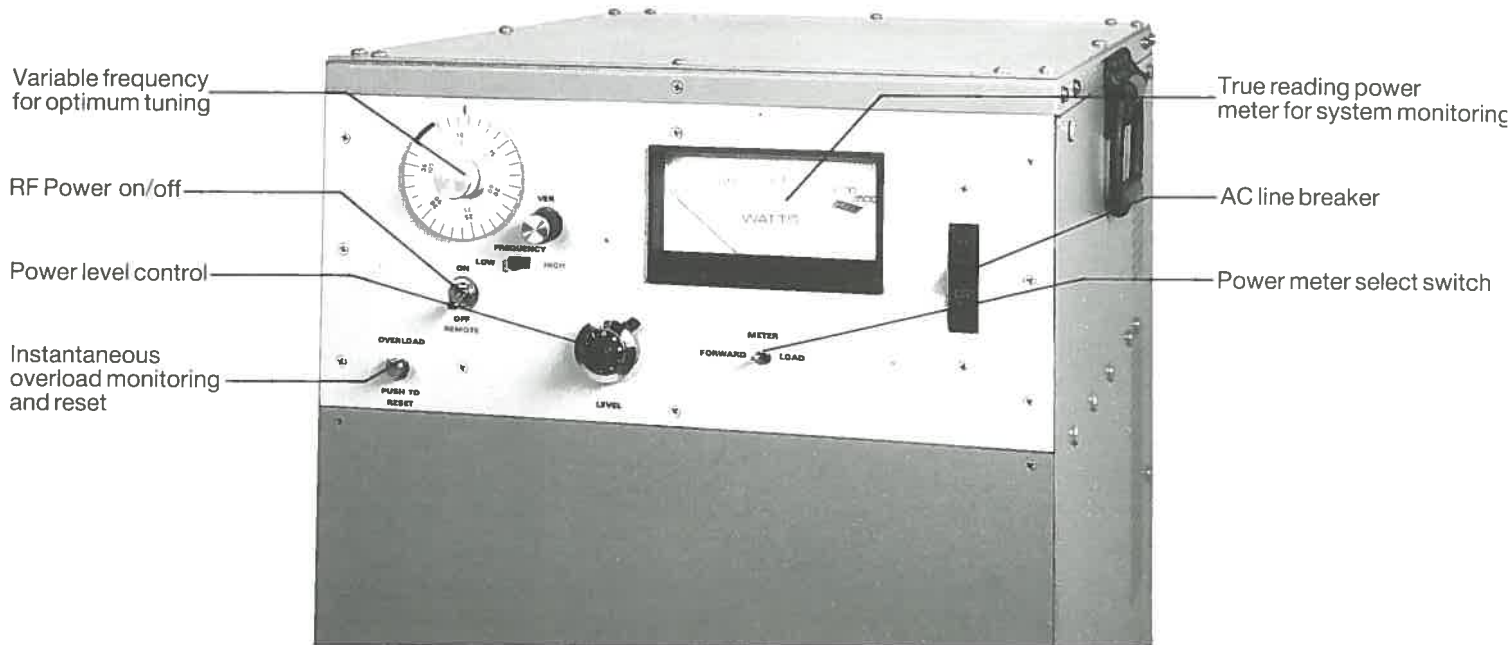


EGR B SERIES

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 combine 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.