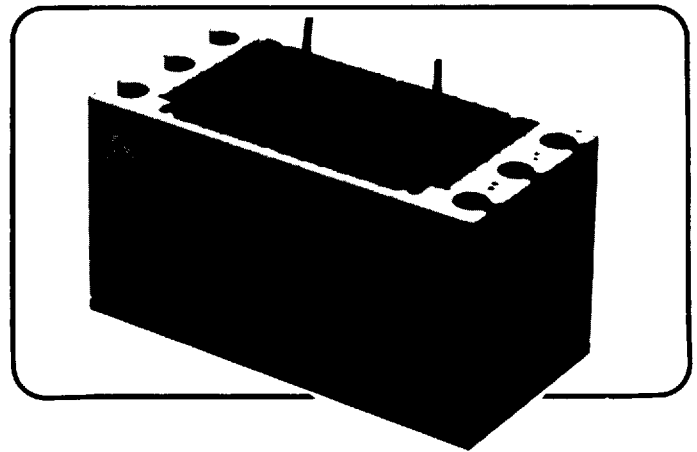


G Series High Frequency Generator

Features:

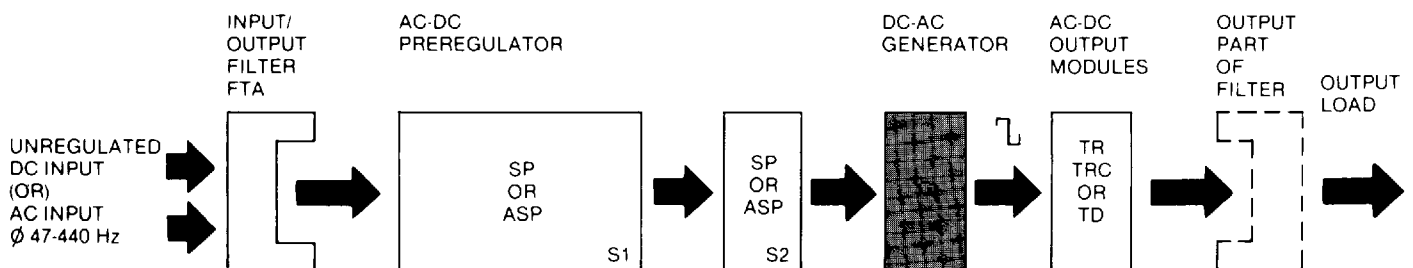
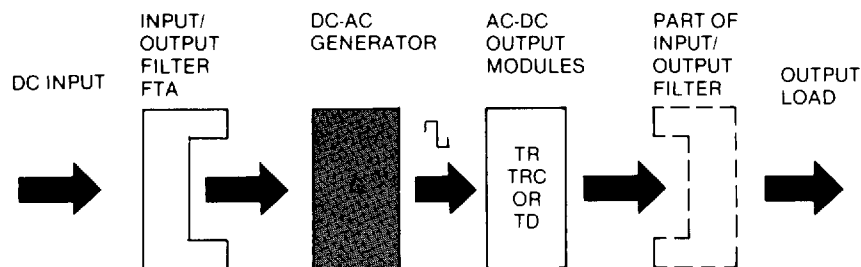
- High MTBF
- High Efficiency - Up to 90%
- High Power Density - 50 watts/cu. in.



G Series High Frequency Generator

Powercube's high frequency generator is a current feedback type DC-AC inverter which develops a balanced AC square wave output from a DC source. The high efficiency 1"x2"x1" inch module drives transformer isolated

output modules. Generators are selected to properly match the available DC input voltage range of each application and will provide a minimum of 40V peak square wave at full load with minimum DC input.



G Series High Frequency Generator

DESIGN INFORMATION

DC Voltage Input Range	Input VDC for 40Vp Output Min. @ full load	Output Power Rating	Typ Efficiency @ full load	Model Number
11-14	11.0	50 watts	86%	11G50W40
15-17*	15.0	60 watts	90%	15G60W40
18-20*	18.0	75 watts	90%	18G75W40
20-22*	20.0	90 watts	90%	20G90W40**
22-29	22.0	90 watts	83%	22G90W40
24-32	24.0	100 watts	85%	24G100W40
27-32	27.0	100 watts	88%	27G100W40
42-54	42.0	90 watts	85%	42G90W40
80-85*	80.0	90 watts	89%	80G90W40

* For use with pre-regulated inputs. See SP Series.

** Limited to 70 watts when used with 20SP40-S1 & -S2 and 36ATDC13.

G Series Specifications:

Output voltage: High frequency square wave,
minimum 40V peak @ Vin Min.
full load, non-isolated

Operating Temperature: -55°C to +100°C (case)

Storage Temperature: -65°C to +125°C

Frequency: 20 kHz minimum (see curve)

Temperature Coefficient
of Vout: 0.02%/°C

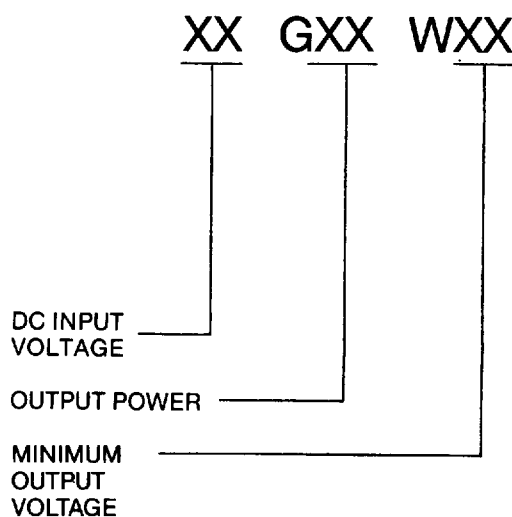
Isolation: All terminals to case 1000VDC
allowing 10 μ amps leakage max.

Case finish: Anodize per MIL-A-8625-11, Class 2

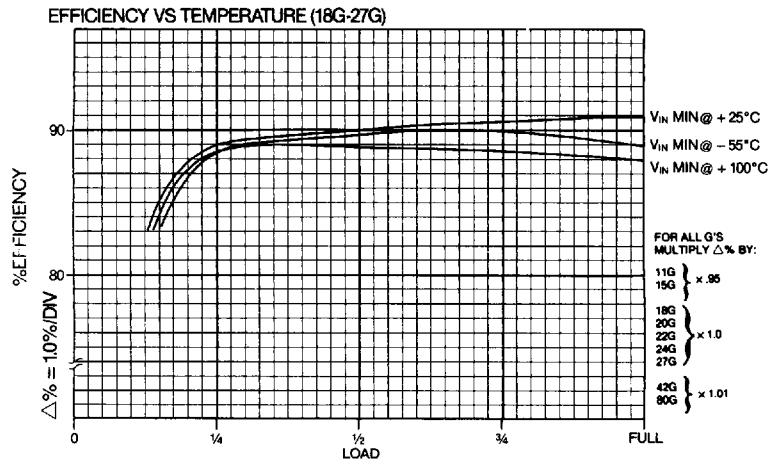
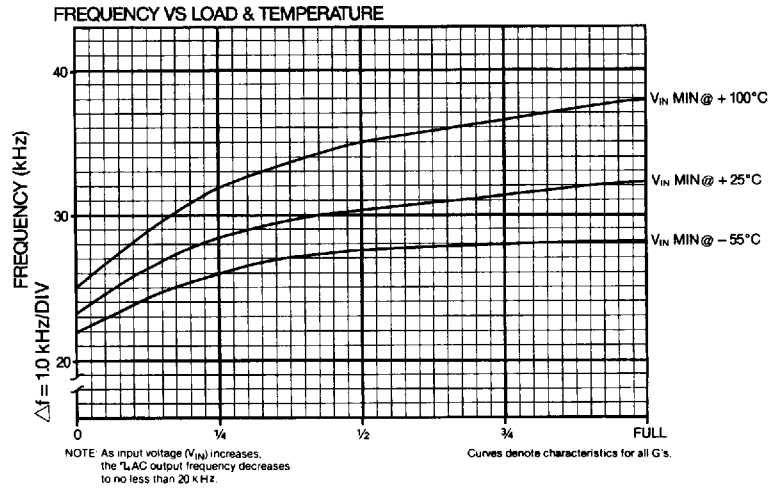
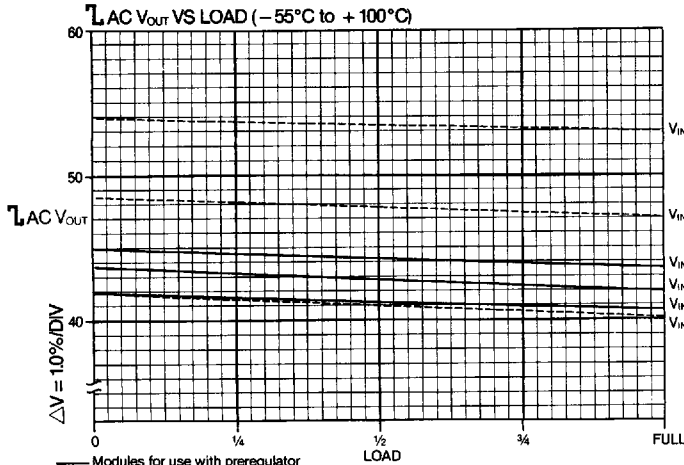
Terminals: 0.040" diameter, solderable per
MIL-T-10727

Weight: 3 oz. max. (85 gms)

PART NUMBER DESIGNATION



TYPICAL CHARACTERISTICS



APPLICATIONS INFORMATION

To insure optimum performance of the Generator modules, the following applications information is offered.

Input Voltage

Generators can be used without switching preregulator modules when the input voltage including ripple, transients or noise are within the DC input voltage range. Otherwise select the preregulator modules and corresponding generator which will fit the application.

Added Power Capability

For power requirements which exceed the generator's rated power, select additional input sets, if applicable. (NEVER operate generator modules with their outputs connected in parallel.)

When operating more than one string of modules in a

G Series High Frequency Generator

APPLICATIONS INFORMATION (cont'd)

system, designing for a balanced distribution of power from each generator will aid in safe area operation, optimized efficiency and good thermal management.

Calculating Required Generator Power

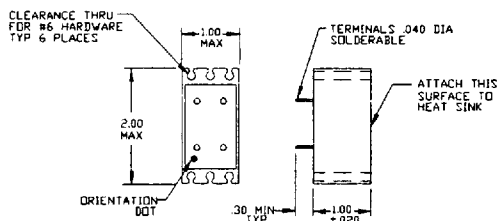
DO NOT OVERSPECIFY REQUIREMENTS FOR THE OUTPUT MODULES: The power ratings apply throughout the rated temperature range and the regulated modules have overcurrent protection. If the loads are pulsed, the peak requirements must not exceed individual output modules

power ratings, or if simultaneous, the maximum power rating of the generator.

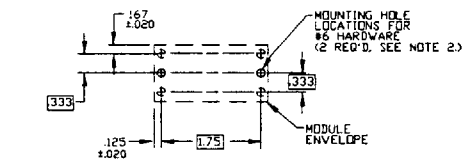
$$\text{Generator Power} = \left[\sum \frac{\text{each output module watts}}{\text{each output module efficiency}} \right] \times 100 = \text{required watts}$$

DIMENSIONAL DRAWINGS

MODULE DIMENSIONS

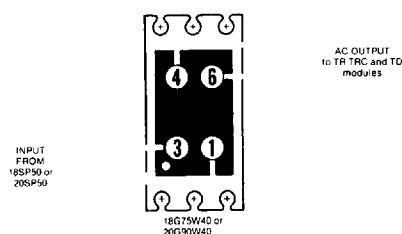


MOUNTING DIMENSIONS

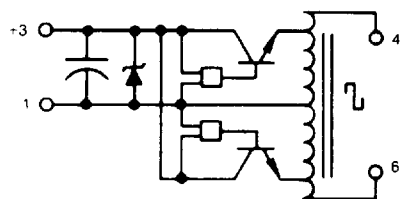


- NOTES:
1. ALL DIMENSIONS IN INCHES.
 2. A TOTAL OF 2 MOUNTING SCREWS ARE RECOMMENDED, 1 ON EACH SIDE OF THE MODULE. POWERCUBE SUGGESTS THAT THE "CENTER" LOCATIONS (SHOWN AS SOLID CIRCLES) BE USED.

FUNCTIONAL DRAWING



ELECTRICAL SCHEMATICS



11G50W40
15G60W40
18G75W40
20G90W40
22G90W40
24G100W40
27G100W40

