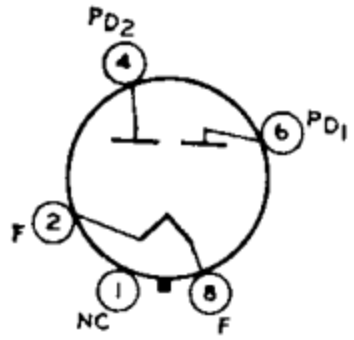


5T

# FULL-WAVE VACUUM RECTIFIER

# 5R4GB

**INDUSTRIAL TYPE**

Glass octal type for industrial and military applications. **Outlines section,** 19D; requires octal socket.

| | | |
|---|---|---|
| Filament Voltage (ac/dc) | 5 | volts |
| Filament Current | 2 | amperes |
| Operating Position | Vertical, base down or up, or Horizontal with pins 2 and 4 in vertical plane | |

## Full-Wave Rectifier

### MAXIMUM RATINGS (Absolute-Maximum Values)

| **For altitudes up to** | **40000** | **20000** | **feet** |
|---|---|---|---|
| Peak Inverse Plate Voltage | 2650 | 3100 | volts |
| AC Plate Supply Voltage Per Plate (RMS, without load) | See Rating Chart | | |
| Peak Plate Current Per Plate | 715 | 715 | mA |
| DC Output Current Per Plate | See Rating Chart | | |
| Hot-Switching Transient Plate Current Per Plate | * | * | |
| Bulb Temperature (At hottest point on bulb surface) | 230 | 230 | °C |

### TYPICAL OPERATION (With Capacitor-Input Filter)

| **For altitudes up to** | **40000** | | **20000** | **feet** |
|---|---|---|---|---|
| AC-Plate-to-Plate Supply Voltage (RMS, without load) | 1400 | 1500 | 2000 | volts |
| Filter-Input Capacitor | 20 | 20 | 20 | μF |
| Total Effective Plate Supply Impedance Per Plate** | 225 | 250 | 375 | ohms |
| DC Ouptut Voltage at Input to Filter (approx.): | | | | |
| At half-load current of 75 mA | — | 910 | 1210 | volts |
| At half-load current of 125 mA | 750 | — | — | volts |
| At full-load current of 150 mA | — | 800 | 1040 | volts |
| At full-load current of 250 mA | 605 | — | — | volts |
| Voltage Regulation (approx.): | | | | |
| Half-load to full-load current | 145 | 110 | 170 | volts |
| DC Ouput Current | 250 | 150 | 150 | mA |

## TYPICAL OPERATION (With Choke-Input Filter)

| For altitudes up to | 40000 | 20000 | feet |
|---|---|---|---|
| AC Plate-to-Plate Supply Voltage (RMS, without load) | 1500 | 1900 | volts |
| Filter-Input Choke | 5 | 10 | henries |
| DC Output Voltage at Input to Filter for dc output (approx.): | | | |
| 87.5 mA | — | 800 | volts |
| 125 mA | 600 | — | volts |
| 175 mA | — | 760 | volts |
| 250 mA | 560 | — | volts |
| Voltage Regulation (Approx.): | | | |
| Half-load to full-load current | 40 | 40 | volts |
| DC Output Current | 250 | 175 | mA |

* If hot-switching is required in operation, choke-input circuits are recommended. Such circuits limit the hot-switching current to a value no higher than that of the peak plate current. When capacitor-input circuits are used, a maximum value of 3 amperes should not be exceeded.

** Indicated values for conditions shown will limit peak plate current to the maximum-rated value. When a filter-input capacitor larger than 20 μf is used, it may be necessary to increase plate-supply impedance to a higher value than that shown in the data to limit the peak plate current to the maximum-rated value.

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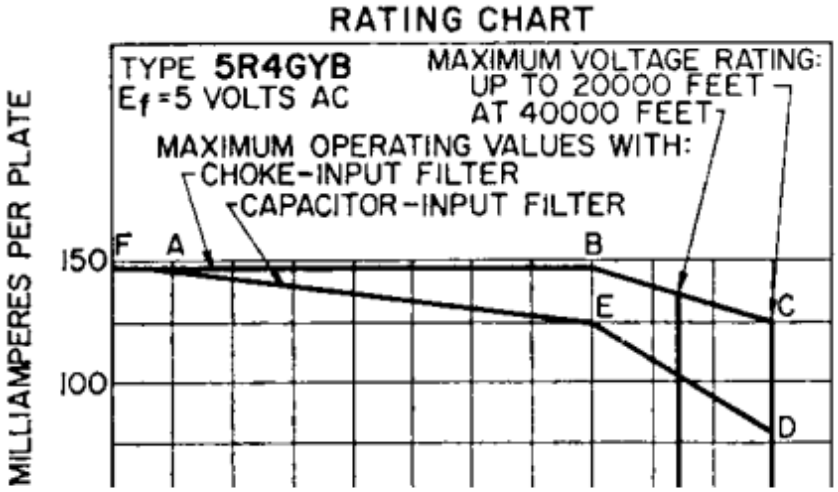
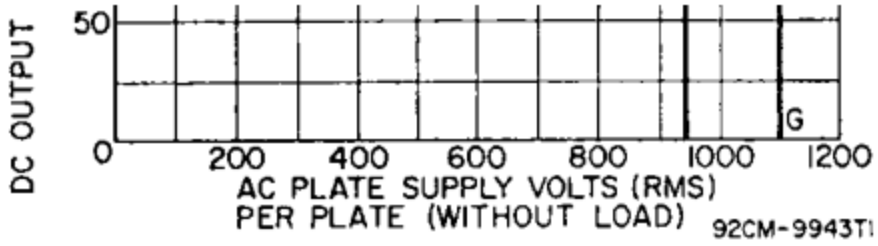
RATING CHART




DC OUTPUT
50
0
G
200
400
600
800
1000
1200
AC PLATE SUPPLY VOLTS (RMS)
PER PLATE (WITHOUT LOAD)
92CM-9943T1