

# AMPEREX TUBE TYPE 5AR4/GZ34

The 5AR4/GZ34 is a high vacuum, full-wave rectifier capable of output currents up to 250 milliamperes. The indirectly heated cathode is connected directly to the heater. Its small size and generous ratings make it particularly suitable for application in new, compact Hi-Fi component designs.

## GENERAL CHARACTERISTICS

### ELECTRICAL

|                       |                                                   |
|-----------------------|---------------------------------------------------|
| Heater                | Indirectly heated cathode,<br>coated unipotential |
| Heater Voltage (A.C.) | 5.0 volts                                         |
| Heater Current        | 1.9 amps                                          |

### MECHANICAL

|                        |                |
|------------------------|----------------|
| Base                   | Octal, 5 pin   |
| Maximum Overall Length | 3 25/64 inches |
| Maximum Diameter       | 1½ inches      |

## MAXIMUM RATINGS (DESIGN CENTER VALUES)

|                                            |            |
|--------------------------------------------|------------|
| Maximum Peak Inverse Voltage               | 1500 volts |
| Maximum Peak Current (per plate)           | 750 Ma     |
| A.C. Supply (plate-to-plate) Voltage (rms) | 1100 volts |
| Maximum D.C. Output Current                | 250 Ma     |
| Maximum Capacity (condenser input filter)  | 60 $\mu$ f |

### Typical Operating Conditions Condenser Input Filter

|                                               |       |       |       |       |       |             |   |
|-----------------------------------------------|-------|-------|-------|-------|-------|-------------|---|
| A.C. Supply Voltage<br>(plate to plate) (rms) | 2x300 | 2x350 | 2x400 | 2x450 | 2x500 | 2x550 volts |   |
| Limiting Resistor <sup>2</sup><br>(minimum)   | 75    | 100   | 125   | 150   | 175   | 200 ohms    | ← |
| D.C. Output Current                           | 250   | 250   | 250   | 250   | 200   | 160 Ma      |   |
| D.C. Output Voltage <sup>3</sup>              | 330   | 380   | 430   | 480   | 560   | 640 volts   | ← |

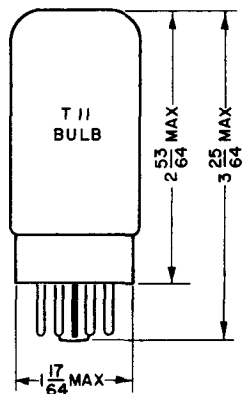
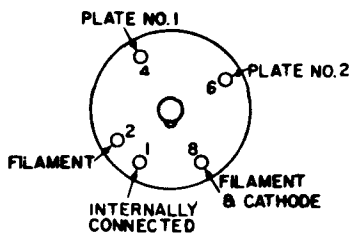
### Choke Input Filter

|                                               |       |       |       |       |       |             |   |
|-----------------------------------------------|-------|-------|-------|-------|-------|-------------|---|
| A.C. Supply Voltage<br>(plate to plate) (rms) | 2x300 | 2x350 | 2x400 | 2x450 | 2x500 | 2x550 volts |   |
| Inductance                                    | 10    | 10    | 10    | 10    | 10    | 10 henrie:  |   |
| Limiting Resistor                             | 0     | 0     | 0     | 0     | 0     | 0 ohms      |   |
| D.C. Output Current                           | 250   | 250   | 250   | 250   | 250   | 225 mA      |   |
| D.C. Output Voltage <sup>3</sup>              | 250   | 290   | 330   | 375   | 420   | 465 volts   | ← |

<sup>2</sup> Per Plate

<sup>3</sup> At maximum values

A diagram of a circular mechanical component, possibly a valve or a pump head, with eight numbered callouts. The component has a central inlet/outlet at the bottom. Callout 1 points to the bottom inlet/outlet. Callout 2 points to the internal passage leading to the bottom. Callout 3 points to the top inlet/outlet. Callout 4 points to the internal passage leading to the top. Callout 5 points to the top inlet/outlet. Callout 6 points to the internal passage leading to the top. Callout 7 points to the bottom inlet/outlet. Callout 8 points to the internal passage leading to the bottom.

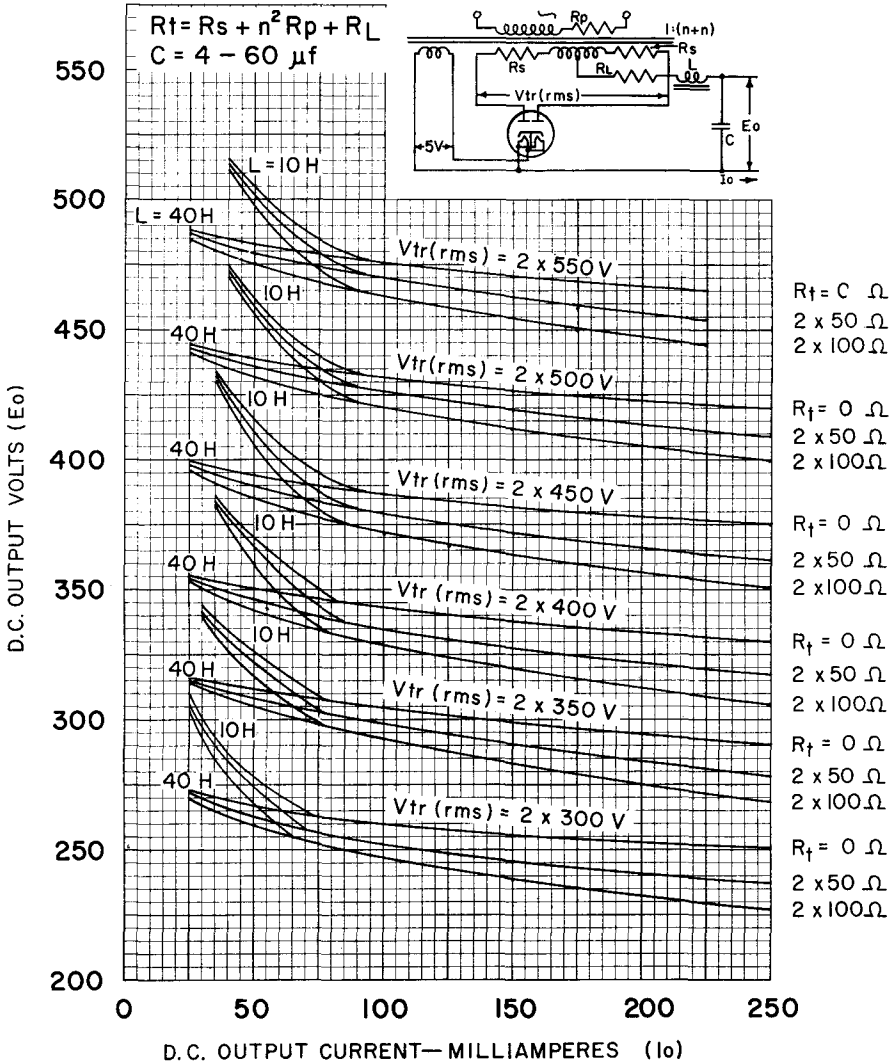


The graph plots Plate Current (Milliamperes) on the vertical axis against Plate Voltage (Volts) on the horizontal axis. The vertical axis ranges from 0 to 700 mA with major grid lines every 100 mA and minor grid lines every 20 mA. The horizontal axis ranges from 0 to 50 V with major grid lines every 10 V and minor grid lines every 2 V. A solid curve represents the tube's characteristic, starting at (0,0) and rising steeply. A dashed tangent line is drawn at a plate voltage of 20 V, extending to the 700 mA mark on the y-axis.

| Plate Voltage (Volts) | Plate Current (Milliamperes) |
|-----------------------|------------------------------|
| 0                     | 0                            |
| 10                    | 100                          |
| 20                    | 350                          |
| 30                    | 650                          |
| 35                    | 700                          |

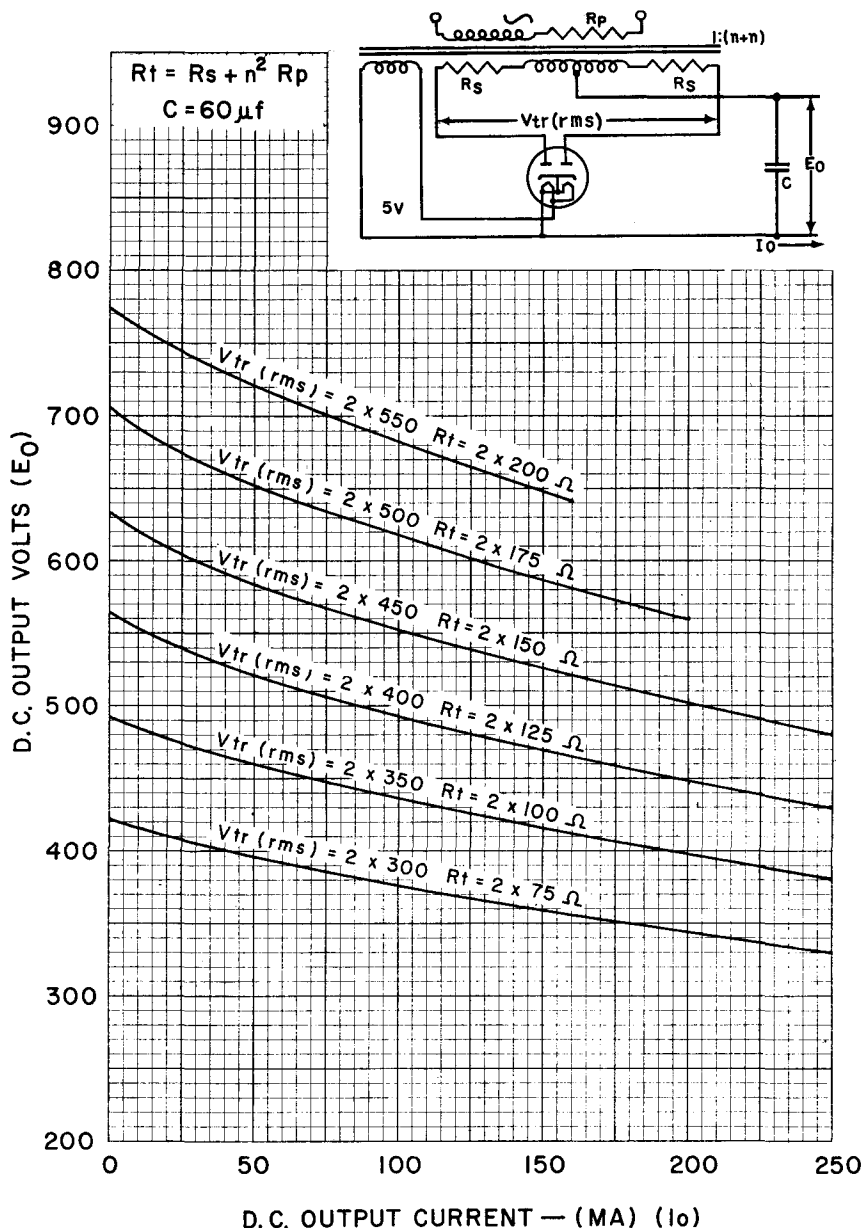
# 5AR4/GZ34

## OPERATION CHARACTERISTICS FULL-WAVE CIRCUIT, CHOKE INPUT TO FILTER



# 5AR4/GZ34

## OPERATION CHARACTERISTICS FULL-WAVE CIRCUIT, CAPACITOR INPUT TO FILTER



# 5AR4/GZ34

RATING CHART

