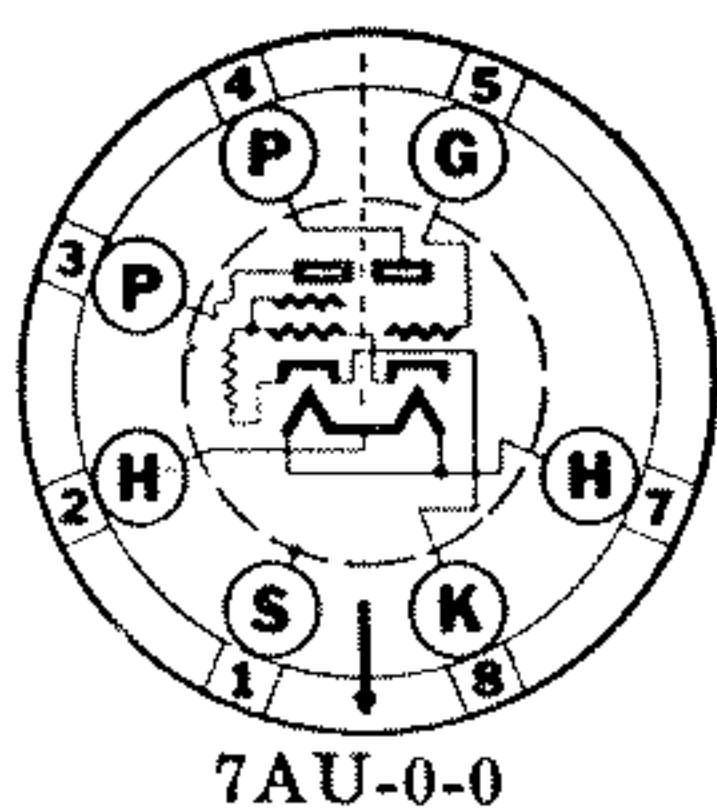
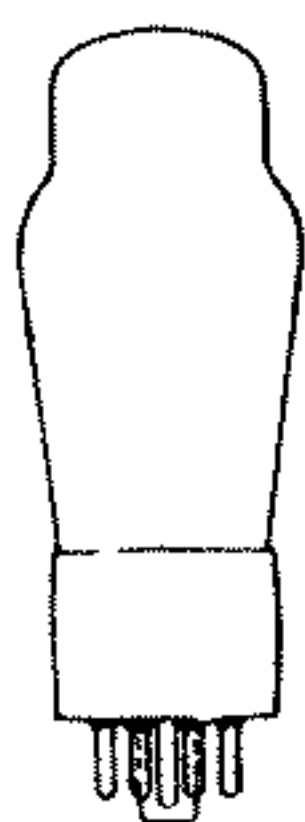




7AU-0-0



# Sylvania Type 6N6G

## DIRECT COUPLED POWER AMPLIFIER

### PHYSICAL SPECIFICATIONS

|                             |                                  |
|-----------------------------|----------------------------------|
| Base.....                   | Medium Octal 7 Pin               |
| Bulb.....                   | ST14                             |
| Maximum Overall Length..... | 4 <sup>5</sup> / <sub>8</sub> "  |
| Maximum Seated Height.....  | 4 <sup>1</sup> / <sub>16</sub> " |
| Mounting Position.....      | Any                              |

### RATINGS

|                                     |            |
|-------------------------------------|------------|
| Heater Voltage AC or DC.....        | 6.3 Volts  |
| Heater Current.....                 | 0.8 Ampere |
| Maximum Output Plate Voltage.....   | 300 Volts  |
| Maximum Input Plate Voltage.....    | 300 Volts  |
| Maximum Heater-Cathode Voltage..... | 90 Volts   |

### TYPICAL OPERATION

#### CLASS A AMPLIFIER

|                             |                 |
|-----------------------------|-----------------|
| Heater Voltage.....         | 6.3 Volts       |
| Heater Current.....         | 0.8 Ampere      |
| Plate Voltage (Output)..... | 300 Volts       |
| Plate Voltage (Input).....  | 300 Volts       |
| Grid Voltage (Input).....   | 0 Volt          |
| Plate Current (Output)..... | 42 Ma.          |
| Plate Current (Input).....  | 9 Ma.           |
| Plate Resistance.....       | 24000 Ohms      |
| Mutual Conductance†.....    | 2400 $\mu$ mhos |
| Amplification Factor.....   | 58              |
| Load Resistance.....        | 7000 Ohms       |
| Power Output*.....          | 4.0 Watts       |
| Power Output**.....         | 6.5 Watts       |

†Input grid—output plate Mutual Conductance.

\*15 volts (r-m-s) signal; total distortion 5%.

\*\*Input grid begins to draw grid current; total distortion 10%.

### APPLICATION

Sylvania 6N6G is a heater type output tube comprising two triode units mounted in an ST-14 bulb. The smaller or input section acts as a driver tube for the larger output unit and is directly coupled to it. The input cathode and output grid are connected internally.

Type 6N6G may be employed in the output stage of a-c operated receivers to deliver large amounts of power with low percentage distortion. Two tubes may be used in a push-pull circuit if additional power is desired.

In general, the circuits designed for the Type 6N6G will be somewhat simplified since the number of component parts required will be less than with other power amplifier tubes. The tube operates without bias so that there is no need for a cathode resistor and its associated by-pass condenser. The output cathode is connected directly to minus B. Nevertheless, the input grid does not draw any current since a grid bias is automatically developed within the tube. The tube may therefore be fed by resistance coupling.

The optimum load resistance for single tube operation is 7000 ohms. When two Type 6N6G tubes are operated in push-pull the plate to plate load resistance should be 10,000 ohms.

The characteristics are shown for 300 volt operation. However, it is permissible to operate Type 6N6G with a plate voltage of 325 volts and a grid bias of -4.5 volts. Under these conditions the current values will be substantially the same as those shown above.

Type 6N6G is the "G" equivalent of Type 6B5.