GENERAL DESCRIPTION

Application: The Hytron 25A7GT is a cathode type dual-purpose high vacuum rectifier, power amplifier pentode. The tube construction is such that the services of a half-wave rectifier and audio output tube are combined within one tube. The primary purpose for the combination is for the conservation of space in compact receivers and at the same time to reduce the heat generated by the filament of the tubes within the receiver.

The Hytron 25A7GT is a glass tube equipped with a small octal base and may be used interchangeably with the 25A70 glass tube.

Heater: Two separate, Coated Uni-potential Cathode. One cathode for rectifier and one for Pentode section. Half of total filament in each cathode sleeve. Filament sections series connected within the bulb.

Voltage Current
25.0 a.c. or d.c. volts 0.3 amp.

Physical Characteristics: Bulb T-9D
Base Connections

Bottom View
1. Rectifier Cathode
2. Heater
3. Pentode Plate
4. Pentode Screen (#2 Grid)

RECTIFIER SECTION

Operating Conditions and Characteristics:

Heater: (rectifier section) internal connection
A. C. plate voltage (RMS)
100 volts
125 volts max
D. C. output current
0.0 volts
750.0 amps

The D.C. potential difference between the cathode and filament must never exceed 175 volts.

Under no conditions of operation should the normal operating heater voltage of the tube be less than 22 V. or more than 25.0 V.

PENTODE SECTION

Operating Conditions and Characteristics:

Heater (pentode section) internal connection
Plate
100 volts
Screen
100 volts
Grid
-10 volts
Amplification Factor
0.3
Plate Resistance
5,000 ohms
Mutual Conductance
1,500 uhms
Plate Current
20.5 ma.
Screen Current
4.0 ma.
Total Resistance
4,500 ohms
Power Output
9.0 %
800 watts

Heater to cathode bias should not exceed 125 volts D.C. as measured between the negative heater terminal and the cathode.

The total resistance introduced into the grid circuit by the input coupling device and filter network should not exceed 0.5 megohm with resistor or self-bias and should not exceed 1.0 megohm with grid or fixed bias.

When operating the 25A7GT pentode section in self-bias, the self-biasing resistor is 625 ohms. The 625 ohm bias resistor must be shunted by a suitable filter network to avoid degradation at low audio frequencies. The recommended minimum by-pass filter condenser is 5.0 mfd.

When operating the tube in fixed bias the cathode is direct-connected to the negative return of the filter circuit at ground potential.

For characteristic curves, refer to type 25A70.