TYPE 25A7GT

HYTRON RADIO TUBES

HYTRON BANTAM

GENERAL DESCRIPTION

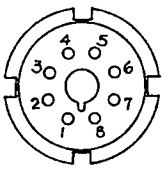
Application: The Hytron 25A7GT is a cathode type dual-purpose high vacuum rectifier, power amplifier pentode. The tube construction is such that the services of a half-wave rectifier and audio output tube are combined within one tube. The primary purpose for the combination is for the conservation of space in compact receivers and at the same time to reduce the heat generated by the filaments 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 25A7G glass tube.

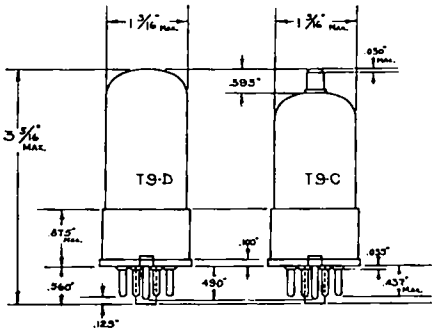
Heater: Two separate, Coated Uni-potential Cathodes. One cathode for rectifier and one for Pentode section. Half of total filament in each cathode sleeve. Filament sections series connected within the bulb.

Voltage	25.0	a.c. or d.c. volts
Current	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)
5. Pentode Control Grid (#1 grid)
6. Rectifier Plate
7. Heater
8. Pentode Cathode and (#3 grid)

Basing 8F

RECTIFIER SECTION

Operating Conditions and Characteristics: (Half-wave high vacuum rectifier.)

Heater:	(rectifier section) internal connection	12.5 volts
	A. C. plate voltage (RMS)	125.0 volts max
	D. C. output current	75.0 mils "

* 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 28.0 V.

PENTODE SECTION

Amplifier (Class A)

Operating Conditions and Characteristics:

Heater (pentode section) internal connection	12.5 volts
Plate	100.0 volts
Screen	100.0 volts
Grid	-15.0 volts
Amplification Factor	90.0
Plate Resistance	50,000 ohms
Mutual Conductance	1,800 umhos
Plate Current	20.5 ma.
Screen Current	4.0 ma.
Load Resistance	4,500 ohms
Total Harmonic Distortion	9.0 %
Power Output	.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 degeneration 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 25A7G. B-1 3-38