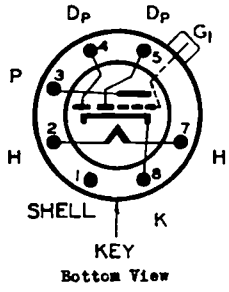
GENERAL DESCRIPTION

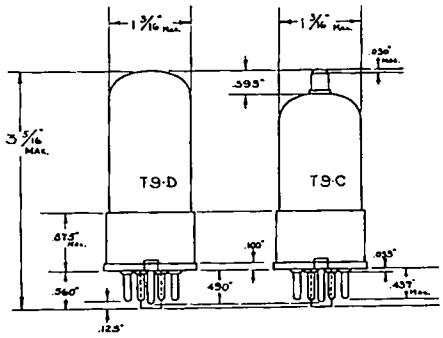
Application: The Hytron 6Q7GTis a cathode type duplex tube consisting of a high-mu triode and two diodes in a single envelope. The combined functions of detection, automatic volume control, and audio amplification can be performed by this tube in properly designed circuits.

The Hytron 6Q7GTis a glass tube equipped with a small octal base and may be used interchangeably with the Hytron 6Q7G glass tube, ing.

Physical Characteristics: Bulb T-9C



Bottom View



RATING AND CHARACTERISTICS

Heater:

Voltage	6.3	Volts AC or DC
Current	.3	Ampere

Note: Voltage between heater and cathode should be kept at a minimum if direct connection is not possible.

AMPLIFIER OPERATION (CLASS A RESISTANCE COUPLED)

*Plate Supply Voltage	100	135	180	250	Volts
Grid Voltage	-1.5	-1.6	-1.75	-1.9	Volts
Plate Current	.11 to .07	.18 to .11	.26 to .16	.44 to .26	Milliamperes
Cathode Resistor	13500 to 21400	8700 to 14500	6700 to 11000	4300 to 7300	Ohms
Plate Resistor	.25 to .5	.25 to .5	.25 to .5	.25 to .5	Megohm
°Grid Resistor	.5	.5	.5	.5	Megohm
°°Voltage Amplification	33 to 36	39 to 41	42 to 44	43 to 45	

*Effective plate voltage will be this value minus the voltage drop in the plate resistor. Voltage at plate should not exceed 250 volts.

°Grid resistor for the following tube.

°°Approximate.

AMPLIFIER OPERATION (CLASS A TRANSFORMER COUPLED)

Plate Voltage	100	250 Max.	Volts
Grid Voltage	-1.5	-3.0	Volts
Plate Current	.35	1.1	Milliamperes
Plate Resistance	87500	58000	Ohms
Amplification Factor	70	70	
Mutual Conductance	800	1200	Micromhos

DIODE OPERATION

The two diode plates are mounted about the common cathode sleeve but are otherwise isolated from each other and the triode unit. These diodes may be operated singly as half-wave rectifiers, tied together as a single half-wave rectifier, or operated in a full-wave arrangement. The full-wave circuit will provide about half the voltage obtainable from the half-wave circuit.

Automatic volume control may be effected by applying the D.C. voltage developed in the diode load to the control elements of preceding amplifier tubes. This D.C. voltage may be obtained from the same diode circuit as used for detection or from one of the diode plates operating separately as a bias rectifier.

from RMA release #134, April 11, 1938

Note: For characteristic curves refer to the type 6Q7G

JOINT ELECTRON DEVICE ENGINEERING COUNCIL

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11 West Forty-Second Street
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Announcement
of
Electron Device Type Reregistration

Release No. 134D (Tentative)*

March 29, 1960

The Joint Electron Device Engineering Council announced the registration of the following electron device designation

6Q7GT

on April 11, 1938, Release No. 134, under the sponsorship of CBS Electronics, Danvers, Massachusetts.

The Radio Corporation of America, Harrison, New Jersey, now proposes reregistration based on the following data:

ITEM	AS REGISTERED	AS PROPOSED	
Direct Interelectrode Capacitances*			
Triode grid to #2 diode plate (max.)	none	0.001	μμf
Triode grid to #1 diode plate (max.)	none	0.001	μμf
#2 diode plate to H + K + pin 1	none	1.7	μμf
#1 diode plate to H + K + pin 1	none	2.2	μμf

* Without external shield.

*Unless valid objection to this reregistration is lodged with the EIA Standards Laboratory prior to April 29, 1960, this reregistration will be made and this information will be considered "FINAL" WITHOUT FURTHER NOTICE!