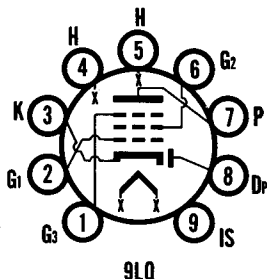




SYLVANIA TYPES

6EQ7
12EQ7
20EQ7



MECHANICAL DATA

Bulb	T-6 1/2
Base	E9-1, Small Button 9-Pin
Outline	6-3
Basing	9LQ
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

	20EQ7	12EQ7	6EQ7
Heater Voltage ($\pm 10\%$)	20	12.6	6.3 Volts
Heater Current	100	150	300 Ma
Maximum Heater-Cathode Voltage			
Heater Negative with Respect to Cathode			
Total D C and Peak			200 Volts Max.
Heater Positive with Respect to Cathode			
D C			100 Volts Max.
Total D C and Peak			200 Volts Max.

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Pentode Section		
Grid No. 1 to Plate002 μmf Max.
Input: g1 to (h+Pk,g3,I.S.+g2)		5.5 μmf
Output: p to (h+Pk,g3,I.S.+g2)		5.0 μmf
Coupling		
Pentode Grid No. 1 to Diode Plate0015 μmf Max.
Pentode Plate to Diode Plate095 μmf Max.

RATINGS (Design Maximum Values)

Plate Voltage	300 Volts Max.
Grid No. 3 Voltage (Positive or Negative)	300 Volts Max.
Grid No. 2 Supply Voltage	300 Volts Max.
Grid No. 2 Voltage	See 6AM8 Rating Chart
Positive Grid No. 1 Voltage	0 Volts Max.
Negative Grid No. 1 Voltage	50 Volts Max.
Plate Dissipation	3.0 Watts Max.
Grid No. 3 Input	0.2 Watts Max.
Grid No. 2 Input	0.6 Watts Max.
Diode Plate Current	3.0 Ma Max.

CHARACTERISTICS AND TYPICAL OPERATION

Pentode—Class A1 Amplifier		
Plate Voltage	100 Volts	
Grid No. 3 and Internal Shield	Tied to Cathode	
Grid No. 2 Voltage	100 Volts	
Grid No. 1 Voltage ¹		
Grid No. 1 Resistor	2.2 Megohms	
Plate Current	9.0 Ma	
Grid No. 2 Current	3.5 Ma	
Transconductance	3800 μmhos	
Plate Resistance (approx.)	250,000 Ohms	
Ec1 for gm = 40 μmhos (approx.)	-20 Volts	
Average Diode Current with 10 Volts D C applied (Test Condition ONLY)	2.0 Ma	

NOTE:

1. Average contact potential bias developed across specified grid resistor.

APPLICATION

The Types 6EQ7, 12EQ7, and 20EQ7 are diode sharp-cutoff pentodes. The diode and pentode units are provided with separate cathodes. The pentode unit is intended for use as an AM/FM IF amplifier. The diode is intended for use in detector and AVC applications.