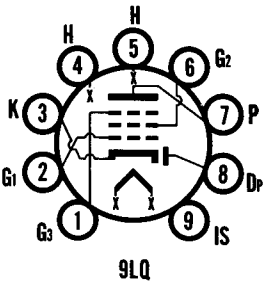
SYLVANIA TYPES 6EQ7 12EQ7 20EQ7



MECHANICAL DATA

Bulb	T-6½
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 (±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 Plate	.002 μμf Max.
Input: g1 to (h+Pk,g3,I.S.+g2)	5.5 μμf
Output: p to (h+Pk,g3,I.S.+g2)	5.0 μμf
Coupling	
Pentode Grid No. 1 to Diode Plate	.0015 μμf Max.
Pentode Plate to Diode Plate	.095 μμf 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.