

Output: p to (h + Pk, g2, IS + g2 + Dk, Dsh)	4.2 Pf
Diode Section (Each Diode)	
Diode Plate to (h + Dk, Dsh + Pk, g3, IS)	1.5 Pf
Diode Cathode; Diode Shield to (h + Dp + Pk, g3, IS)	7.5 Pf
Coupling	
Pentode Grid No. 1 to Diode Plate (Each Diode) (Max.)	0.005 Pf
Pentode Plate to Diode Plate (Each Diode) (Max.)	0.02 Pf
RATINGS (Design Maximum Rating System)	
Plate Voltage (Max.)	330 Volts
Grid No. 2 Supply Voltage (Max.)	330 Volts
Grid No. 2 Voltage	See Rating Chart (Gen. Info. Sec.)
Positive Grid No. 1 Voltage (Max.)	0 Volt
Plate Dissipation (Max.)	5.0 Watts
Grid No. 2 Dissipation (Max.)	1.1 Watts
Grid No. 1 Circuit Resistance	
Cathode Bias (Max.)	0.25 Megohms
Fixed Bias (Max.)	0.1 Megohm

CHARACTERISTICS AND TYPICAL OPERATION**Pentode—Class A1 Amplifier**

Plate Voltage	200 Volts
Grid No. 2 Voltage	150 Volts
Cathode Bias Resistor	100 Ohms
Plate Current	25 Ma
Grid No. 2 Current	5.5 Ma
Transconductance	11,500 μ mhos
Plate Resistance (Approx.)	60,000 Ohms
Ec1 for Ib = 100 μ a (Approx.)	-10 Volts
Average Diode Current with 10 Volts DC Applied (Each Diode)	1.5 Ma

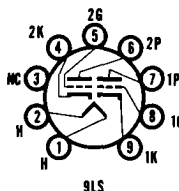
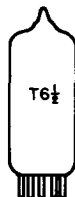
INSTANTANEOUS PLATE KNEE VALUES

Eb = 60 V, Ec2 = 150 V, Ec1 = 0 V;

Ib = 55 Ma and Ic2 = 18 Ma

6EU7**AF AMPLIFIER or
PHASE INVERTER****High Mu Twin Triode**

Construction	Miniature T-6½
Base	Button 9 Pin, E9-1
Basing	9LS
Outline	6-2
Maximum Diameter	0.875 In.
Maximum Seated Height	1.937 In.
Maximum Overall Height	2.187 In.

**ELECTRICAL DATA****HEATER OPERATION**

Heater Voltage	6.3 Volts
Heater Current	300 Ma
Maximum Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	
Total DC and Peak	200 Volts
Heater Positive with Respect to Cathode	
DC	100 Volts
Total DC and Peak	200 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

	Section 1	Section 2
Grid to Plate	1.5	1.5 Pf
Input: g to (h + k)	1.6	1.6 Pf
Output: p to (h + k)	0.2	0.2 Pf
RATINGS (Design Maximum Rating System) (Each Section)		
Plate Voltage (Max.)		330 Volts
Plate Dissipation (Max.)		1.2 Watts
Positive Grid Voltage (Max.)		0 Volt
Negative Grid Voltage (Max.)		55 Volts
CHARACTERISTICS AND TYPICAL OPERATION		
Class A1 Amplifier (Each Section)		
Plate Voltage	100	250 Volts
Grid Voltage	-1	-2 Volts
Plate Current	0.5	1.2 Ma
Transconductance	1250	1600 μ mhos
Amplification Factor	100	100

Plate Resistance.....	80,000	62,500 Ohms
Equivalent Noise and Hum Voltage (Referenced to Grid—Each Unit) Average Value ⁽¹⁾ (RMS) ...	—	1.8 μ Volts

NOTE:

- (1) Measured under the following conditions: $E_f = 6.3$ Vac, center-tap of heater transformer grounded; $E_{bb} = 250$ Vdc; $R_b = 0.1$ Megohm; $R_k = 2700$ Ohms; $C_k = 100$ μ f; $R_g = 0$; $F = 25$ to 10,000 Hz.

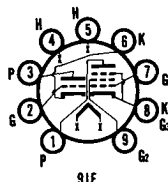
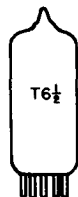
OSCILLATOR (T) MIXER (P)

6EU8

5EU8

Medium Mu Triode and Sharp Cutoff Pentode

Construction Miniature T-6½
 Base Button 9 Pin, E9-1
 Basing..... 9JF
 Outline 6-2
 Maximum Diameter 0.875 In.
 Maximum Seated Height 1.937 In.
 Maximum Overall Height 2.187 In.



ELECTRICAL DATA HEATER OPERATION

	5EU8	6EU8
Heater Voltage.....	4.7	6.3 Volts
Heater Current	600	450 Ma
Heater Warm-up Time	11	11 Seconds
Maximum Heater-Cathode Voltage		
Heater Negative with Respect to Cathode		
Total DC and Peak.....		200 Volts
Heater Positive with Respect to Cathode		
DC		100 Volts
Total DC and Peak.....		200 Volts

DIRECT INTERELECTRODE CAPACITANCES

Pentode Section

	Shielded	Unshielded
Grid No. 1 to Plate: (g1 to p) (Max.)	0.10	0.02 Pf
Input: g1 to (h + k)	5.0	5.0 Pf
Output: p to (h + k)	3.4	2.6 Pf

Triode Section

Grid to Plate: (g to p)	1.7	1.7 Pf
Input: g to (h + k)	3.2	3.0 Pf
Output: p to (h + k + s)	1.1	1.6 Pf
Cathode to Heater (Each Section): (k to h)	3.60	3.60 Pf

RATINGS (Design Center Rating System)

	Triode	Pentode
Plate Voltage (Max.)	330	330 Volts
Grid No. 2 Supply Voltage (Max.)	—	330 Volts
Positive DC Grid No. 1 Voltage (Max.)	0	0 Volt
Plate Dissipation (Max.)	3.0	3.1 Watts
Grid No. 2 Dissipation (Max.)	—	0.55 Watts
Grid No. 1 Resistance (Max.)	100	100 Kilohms

CHARACTERISTICS AND TYPICAL OPERATION

	Triode	Pentode
Plate Voltage	150	125 Volts
Grid No. 2 Voltage	—	125 Volts
Cathode Resistor	56	— Ohms
Grid No. 1 Voltage	—	-1.0 Volt
Amplification Factor	40.0	—
Transconductance	8500	6400 μ mhos
Plate Resistance (Approx.)	5000	80,000 Ohms
Plate Current	18.0	12.0 Ma
Grid No. 2 Current	—	4.0 Ma
Grid No. 1 Voltage (Approx.) for $I_b = 10$ μ a	-12.0	-9.0 Volts
Cathode Warm-up Time ⁽¹⁾	35	— Seconds

NOTE:

- (1) Cathode Warm-up Time is defined as the time required for transconductance to reach 6500 μ mhos when a tube is operated from a cold start at a plate potential of 100 volts dc, zero grid bias, and at a constant heater current of 560 milliamperes for 5EU8 or a heater potential of 5.5 volts for the 6EU8.