

MECHANICAL DATA

Bulb	T-12
Base	B6-73, Short Jumbo Shell Octal, 6-Pin
Top Cap	C1-1, Small
Outline	See Drawing
Basing	8FU
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage	6.3 Volts
Heater Current	600 Ma
Peak Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	180 Volts Max.
Heater Positive with Respect to Cathode	180 Volts Max.

DIRECT INTERELECTRODE CAPACITANCES

Grid to Plate	1.0 $\mu\mu\text{f}$
Input	3.8 $\mu\mu\text{f}$
Output	0.04 $\mu\mu\text{f}$ Max.

RATINGS (Design Center Values)

Voltage Control Service	
DC Plate Voltage	27000 Volts Max.
Unregulated DC Supply Voltage	55000 Volts Max.
Grid Voltage	
DC	-125 Volts Max.
Peak	-550 Volts Max.
DC Plate Current	1.5 Ma Max.
Plate Dissipation	25 Watts Max.
Grid Circuit Resistance	
With Unregulated Supply Having an Equivalent Resistance of at Least 8 Megohms	4 Megohms Max.
With Unregulated Supply Having an Equivalent Resistance Less Than 8 Megohms	See Fig. 1

CHARACTERISTICS

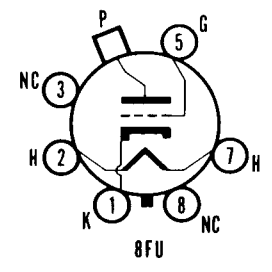
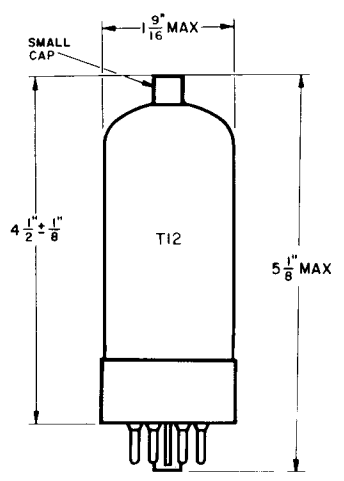
Amplification Factor	1650
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TYPICAL OPERATION

Shunt Voltage Regulator		
Unregulated Supply		
DC Voltage	29800	36300 Volts
Equivalent Resistance	8	8 Megohms
Voltage Divider Values		
R1 (5 watts)	120	220 Megohms
R2 (2 watts)	1	1 Megohms
R3 (1/2 watt)	2	3 Megohms
Reference Voltage Supply		
DC Value	500	500 Volts
Equivalent Resistance	1000	1000 Ohms

QUICK REFERENCE DATA

The Sylvania Type 6BD4A is a low current, sharp cutoff, beam triode designed for use as a voltage regulator in high voltage, low current supplies. The 6BD4A has a maximum plate voltage rating of 27,000 volts, a maximum plate current rating of 1.5 Ma and a maximum plate dissipation of 25 watts. With the exception of its higher plate voltage rating and plate dissipation the 6BD4A is identical to the Type 6BD4.



SYLVANIA ELECTRIC PRODUCTS INC.

RADIO TUBE DIVISION EMPORIUM, PA.

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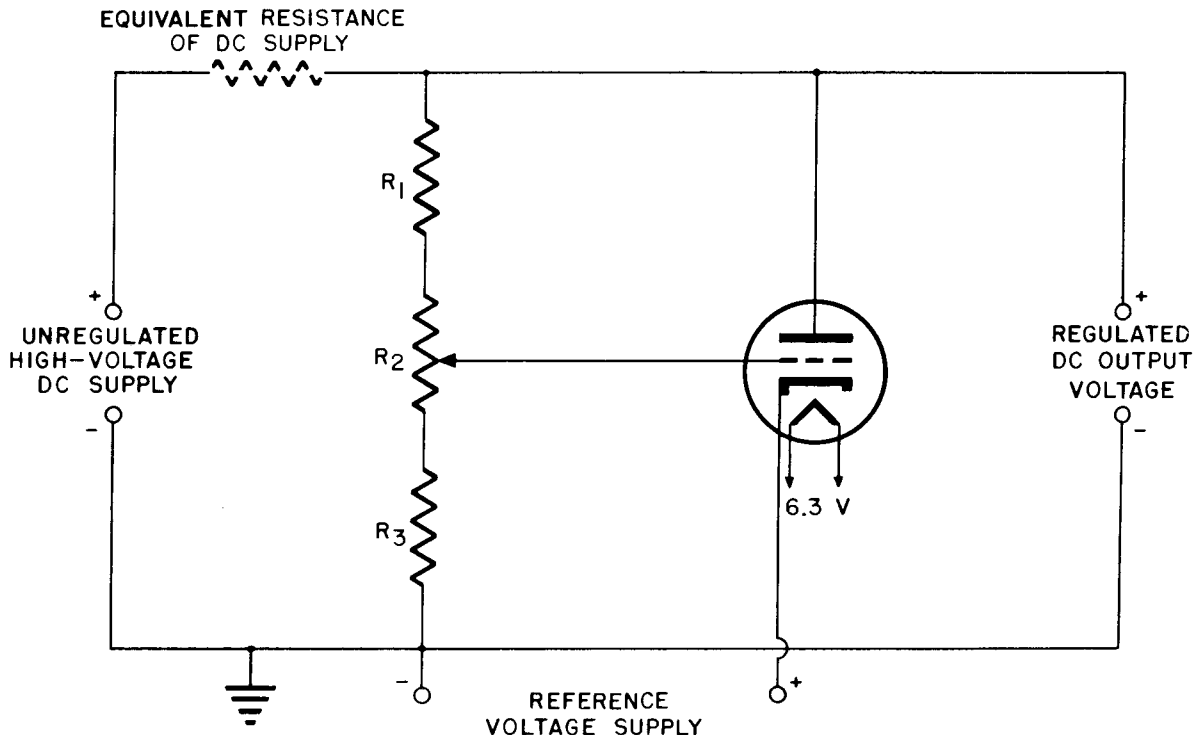
TYPICAL OPERATION (Continued)

Effective Grid-Plate Transconductance	138	116 μ mhos
DC Plate Current		
For Load Current of 0 Ma	1055	1035 μ a
For Load Current of 1 Ma	100	100 μ a
Regulated DC Output Voltage		
For Load Current of 0 Ma	20000	27000 Volts
For Load Current of 1 Ma	19700	26500 Volts

WARNING:

X-ray radiation shielding may be necessary to protect against possible danger of personal injury from prolonged exposure at close range if this tube is operated at higher than the manufacturer's Maximum Rated Anode voltage or 16,000 volts, whichever is less.

SHUNT REGULATOR CIRCUIT



AVERAGE TRANSFER CHARACTERISTICS

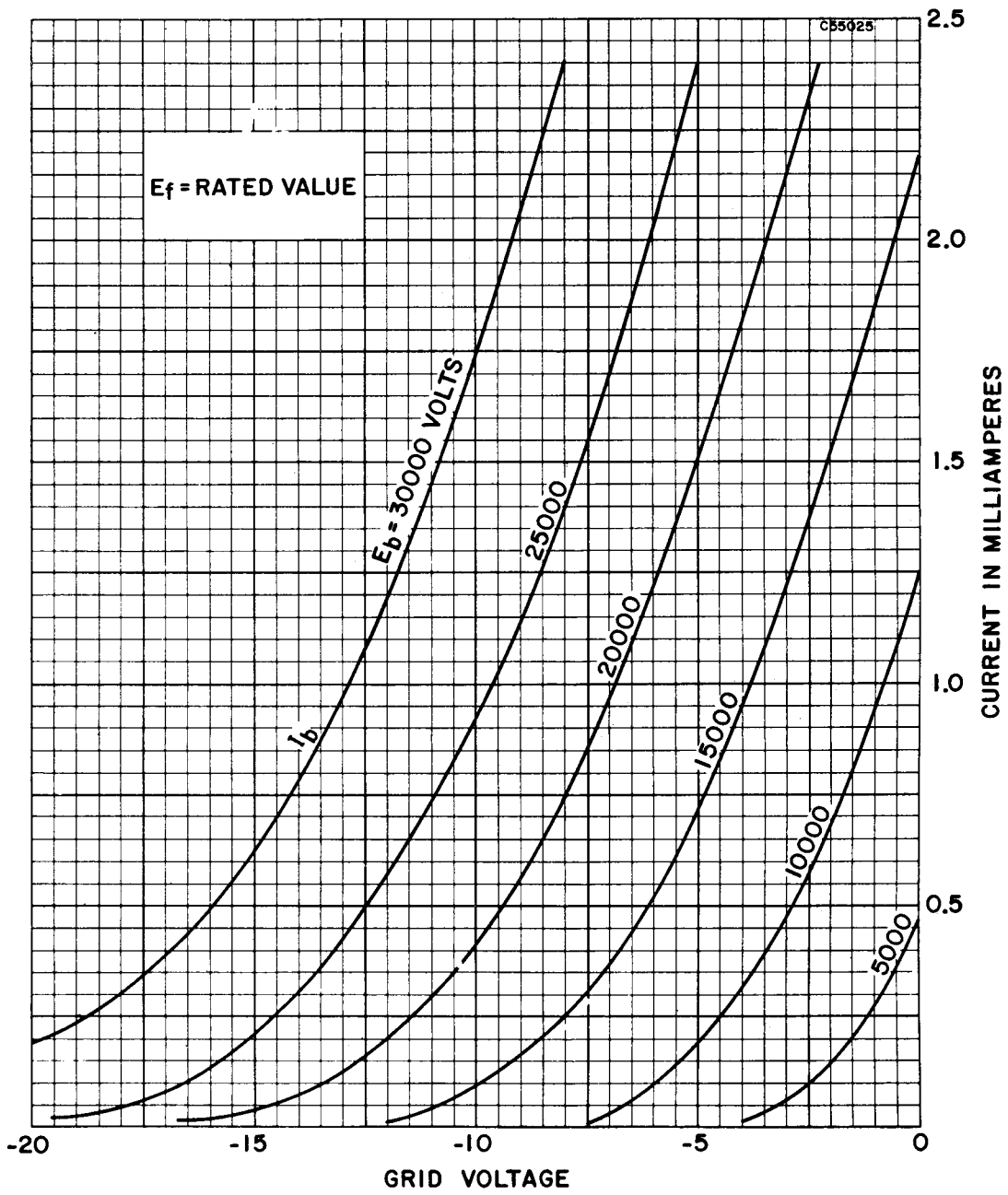


FIGURE 1
Maximum Grid Circuit Resistance vs.
Equivalent Resistance of Unregulated
DC Voltage Supply

