

**MECHANICAL DATA**

Bulb . . . . .	T-6½
Base . . . . .	E9-1, Small Button 9-Pin
Outline . . . . .	6-2
Basing . . . . .	9A
Cathode . . . . .	Coated Unipotential
Mounting Position . . . . .	Any

**ELECTRICAL DATA**

**HEATER CHARACTERISTICS**

	<b>6AX7</b>	<b>12AX7</b>
Heater Voltage Series/Parallel . . .	6.3/3.15	12.6/6.3 Volts
Heater Current Series/Parallel . . .	300/600	150/300 Ma
Heater Warm-up Time <sup>1 &amp; 4</sup> . . . . .	11	Seconds
Heater-Cathode Voltage (Design Center Values)		
Heater Negative with Respect to Cathode		
Total DC and Peak . . . . .	200	200 Volts Max.
Heater Positive with Respect to Cathode		
DC . . . . .	100	100 Volts Max.
Total DC and Peak . . . . .	200	200 Volts Max.

**DIRECT INTERELECTRODE CAPACITANCES**

	Section 1 <sup>2</sup>		Section 2 <sup>2</sup>	
	Shielded <sup>3</sup>	Unshielded	Shielded <sup>3</sup>	Unshielded
Grid to Plate . . . . .	1.7	1.7	1.7	1.7 μμf
Input (g to h+k) . . . . .	1.8	1.6	1.8	1.6 μμf
Output (p to h+k) . . . . .	1.9	0.46	1.9	0.34 μμf

**RATINGS (Design Center Values) Each Section**

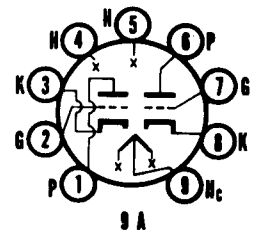
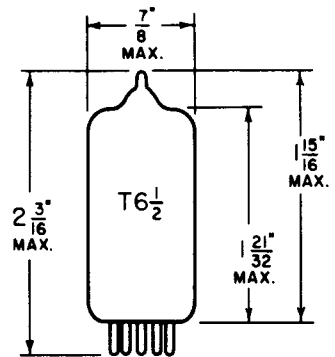
Plate Voltage . . . . .	300 Volts Max.
Plate Dissipation . . . . .	1.0 Watt Max.
Positive DC Grid Voltage . . . . .	0 Volts Max.
Negative DC Grid Voltage . . . . .	-50 Volts Max.

**CHARACTERISTICS AND TYPICAL OPERATION**

Class A <sub>1</sub> Amplifier — Each Section			
Plate Voltage . . . . .	100	250 Volts	
Grid Voltage . . . . .	-1	-2 Volts	
Plate Current . . . . .	0.5	1.2 Ma	
Plate Resistance . . . . .	80,000	62,500 Ohms	
Transconductance . . . . .	1250	1600 μmhos	
Amplification Factor . . . . .	100	100	

**QUICK REFERENCE DATA**

The Sylvania Type 12AX7 is a miniature high-mu twin triode having separate cathodes. It is designed for service as an audio voltage amplifier or phase inverter. The center tapped heater of the Type 12AX7 permits operation on 12.6 or 6.3 volts. The 12AX7 is identical to the 6AX7 except for heater characteristics. The 6AX7 employs a 600 Ma heater and controlled heater warm-up time for use in series string television receivers.



**SYLVANIA ELECTRIC PRODUCTS INC.**

**RADIO TUBE DIVISION  
EMPORIUM, PA.**

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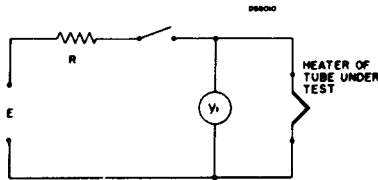
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## NOTES:

1. *Heater Warm-up Time is defined as the time required in the circuit shown below for the voltage across the heater terminals to increase from zero to the heater test voltage ( $V_1$ ). The conditions used in conjunction with the test circuit depend upon the rated heater voltage and current of the tube under test.*

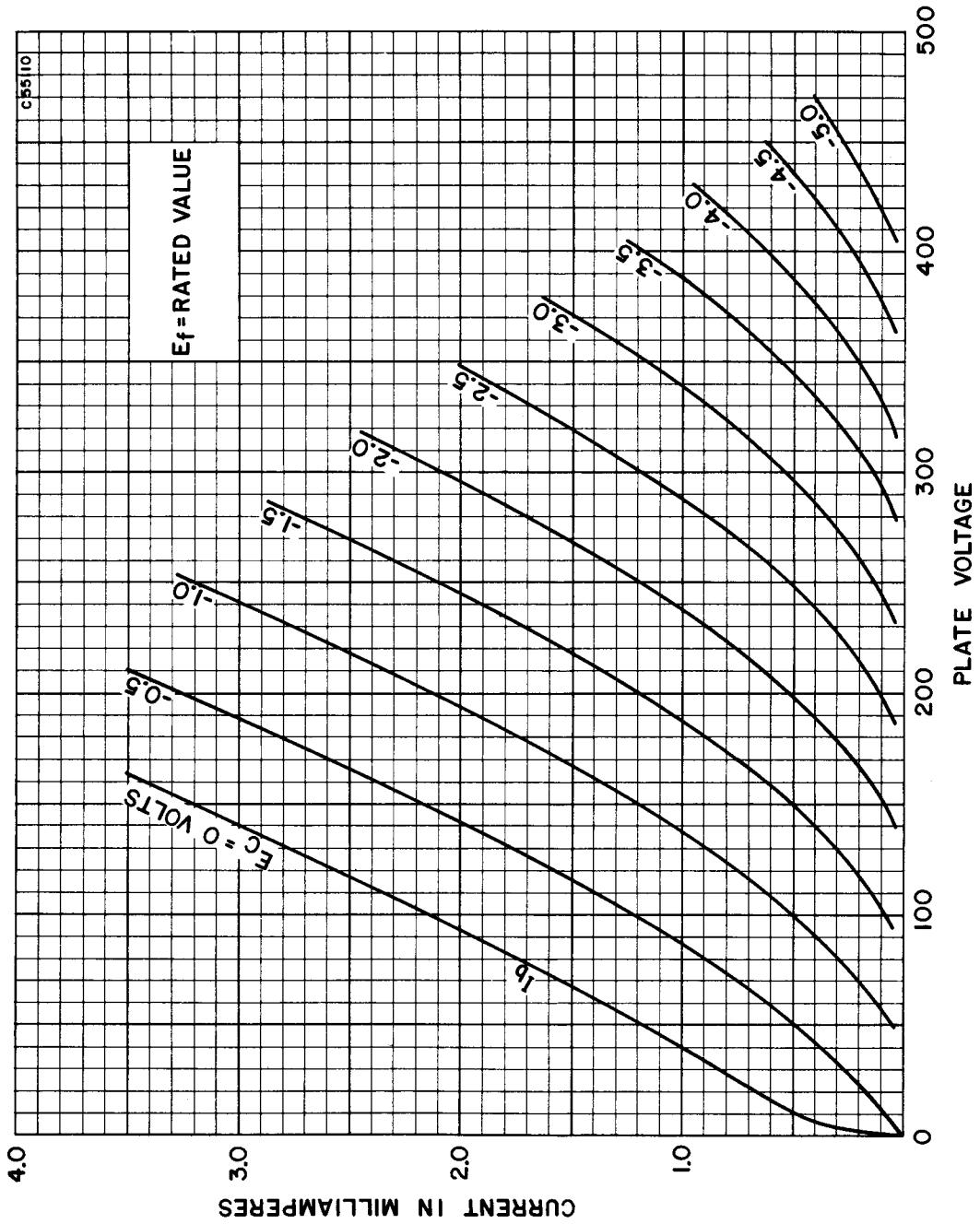
*For this type:  $E = 12.5$  Volts,  $R = 15.8$  Ohms,  $V_1 = 2.5$  Volts.*



*$E$  — Applied Voltage, RMS or DC  
 $R$  — Total Series Resistance  
 $V_1$  — Heater Test Voltage, RMS or DC  
 (80% Rated Heater Voltage)*

2. *Section No. 1 connects to Pins 6, 7 and 8.  
 Section No. 2 connects to Pins 1, 2 and 3.*
3. *External shield No. 315 connected to cathode of section under test.*
4. *Controlled Heater Warm-up Time applies to parallel connection only.*

AVERAGE PLATE CHARACTERISTICS  
EACH SECTION



AVERAGE TRANSFER CHARACTERISTICS  
EACH SECTION

