SYLVANIA

engineering data service

SYLVANIA
12AX7
6AX7

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

	6AX7	12AX7	
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[1 & 4]	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[2]		Section 2[2]		
	Shielded[3]	Unshielded	Shielded[3]	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.

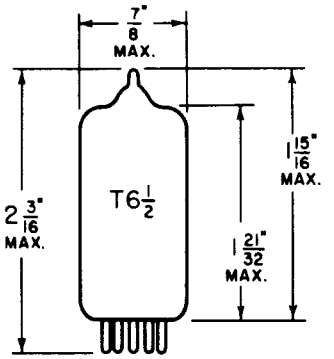
CHARACTERISTICS AND TYPICAL OPERATION

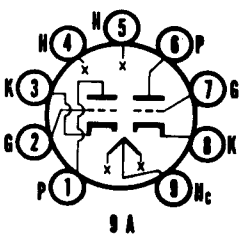
Class A_1 Amplifier — Each Section

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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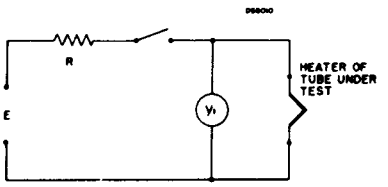
NOTES:

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 (V1). The conditions used in conjunction with the test circuit depend upon the rated heater voltage and current of the tube under test.*

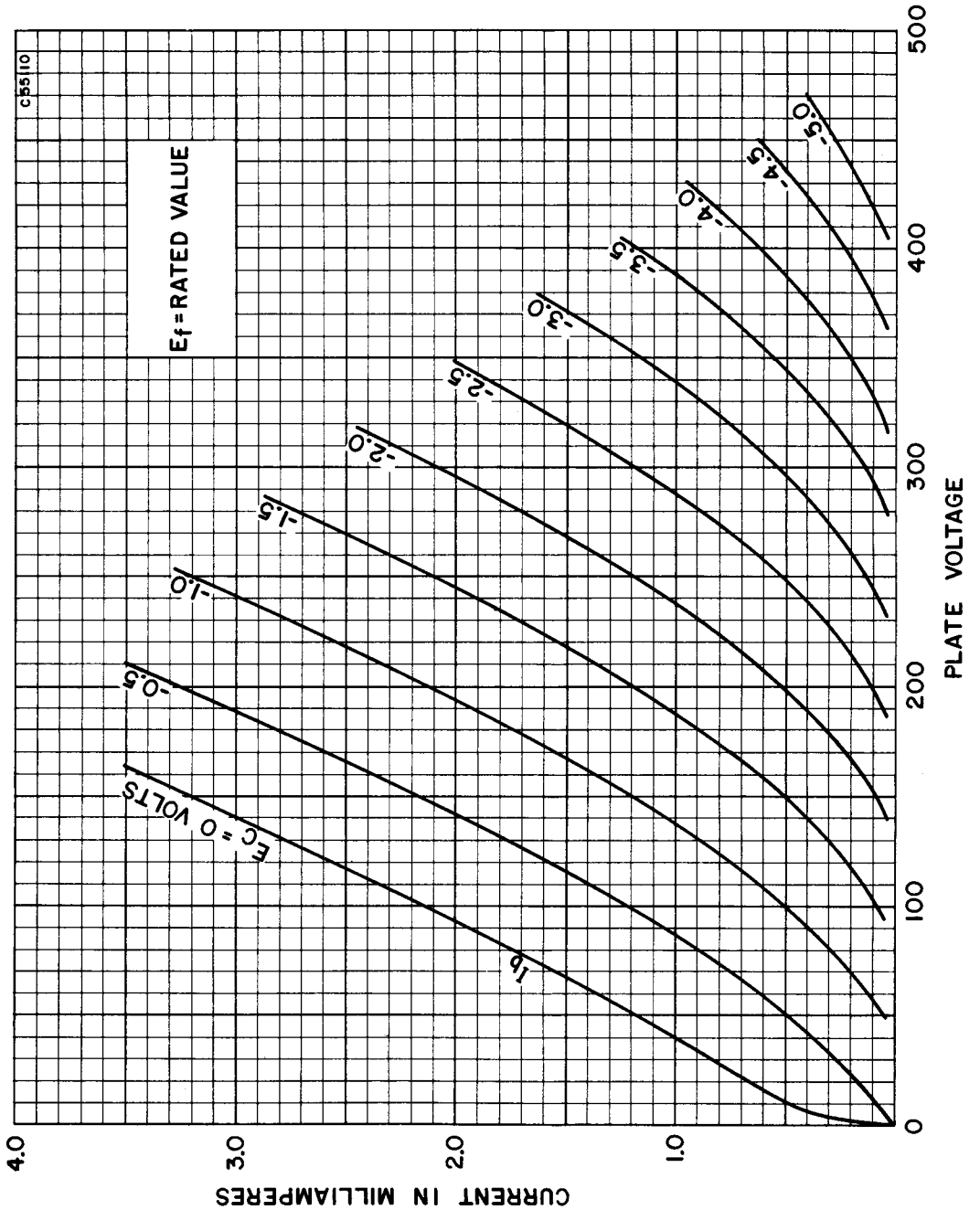
   For this type: E = 12.5 Volts, R = 15.8 Ohms, V1 = 2.5 Volts.



E — Applied Voltage, RMS or DC
R — Total Series Resistance
V1 — 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