

### MECHANICAL DATA

Bulb . . . . .	T-9
Base . . . . .	B8-6, Intermediate Shell Octal 8-Pin or B8-58, Short Intermediate Shell Octal 8-Pin
Outline . . . . .	9-11 or 9-41
Basing . . . . .	8BD
Cathode . . . . .	Coated Unipotential
Mounting Position . . . . .	Any

### ELECTRICAL DATA

#### HEATER CHARACTERISTICS

	6SN7GTA	6SN7GTB	8SN7GTB	12SN7GTA	
Heater Voltage . . . . .	6.3	6.3	8.4	12.6	Volts
Heater Current . . . . .	600	600	450	300	Ma
Heater Warm-up Time <sup>1</sup> . . . . .		11	11		Seconds
Heater-Cathode Voltage (Design Center Values)					
Heater Negative with Respect to Cathode					
Total DC and Peak. . . . .	200	200	200	200	Volts Max.
Heater Positive with Respect to Cathode					
DC . . . . .	100	100	100	100	Volts Max.
Total DC and Peak. . . . .	200	200	200	200	Volts Max.

#### DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

	Section 1 <sup>2</sup>	Section 2
Grid to Plate . . . . .	4.0	3.8 $\mu\text{f}$
Input . . . . .	2.2	2.6 $\mu\text{f}$
Output . . . . .	0.7	0.7 $\mu\text{f}$

#### RATINGS—Each Section (Design Center Values—Except as Noted)

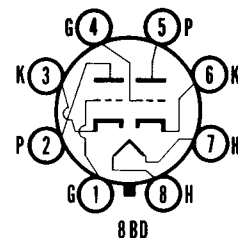
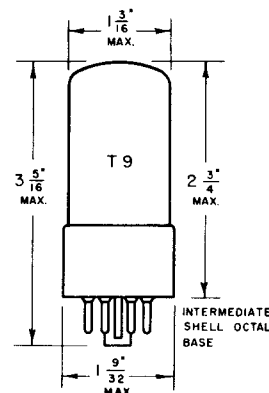
	Class A <sub>1</sub> Amplifier	Vertical <sup>3</sup> Deflection Amplifier	
Plate Voltage . . . . .	450	450 Volts	Max.
Peak Positive Plate Voltage (Abs. Max.) . . . . .		1500 Volts	
Plate Dissipation			
Each Plate . . . . .	5.0	5.0 Watts	Max.
Both Plates . . . . .	7.5	7.5 Watts	Max.
Peak Negative Grid Voltage . . . . .		250 Volts	Max.
Cathode Current . . . . .	20	20 Ma	Max.
Peak Cathode Current . . . . .		70 Ma	Max.
Grid No. 1 Circuit Resistance			
Fixed Bias . . . . .	1.0	Megohm	Max.
Cathode Bias . . . . .	1.0	2.2 Megohms	Max.

	Vertical <sup>3</sup> Deflection Oscillator	Horizontal <sup>3</sup> Deflection Oscillator	
Plate Voltage . . . . .	450	450 Volts	Max.
Plate Dissipation			
Each Plate . . . . .	5.0	5.0 Watts	Max.
Both Plates . . . . .	7.5	7.5 Watts	Max.
Peak Negative Grid Voltage . . . . .	400	600 Volts	Max.
Average Cathode Current . . . . .	20	20 Ma	Max.
Peak Cathode Current . . . . .	70	300 Ma	Max.
Grid Circuit Resistance . . . . .	2.2	2.2 Megohms	Max.

### QUICK REFERENCE DATA

The Sylvania Types 6SN7GTA, 6SN7GTB, 8SN7GTB, and 12SN7GTA are medium  $\mu$ , double triodes intended for use as horizontal multivibrators, phase inverters, and combined vertical oscillators and deflection amplifiers.

Types 6SN7GTB and 8SN7GTB have controlled heater warm-up time for series string operation.



SYLVANIA ELECTRIC  
PRODUCTS INC.  
RADIO TUBE DIVISION  
EMPORIUM, PA.

Prepared and Released By The  
TECHNICAL PUBLICATIONS SECTION  
EMPORIUM, PENNSYLVANIA

FEBRUARY, 1957

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**CHARACTERISTICS AND TYPICAL OPERATION**

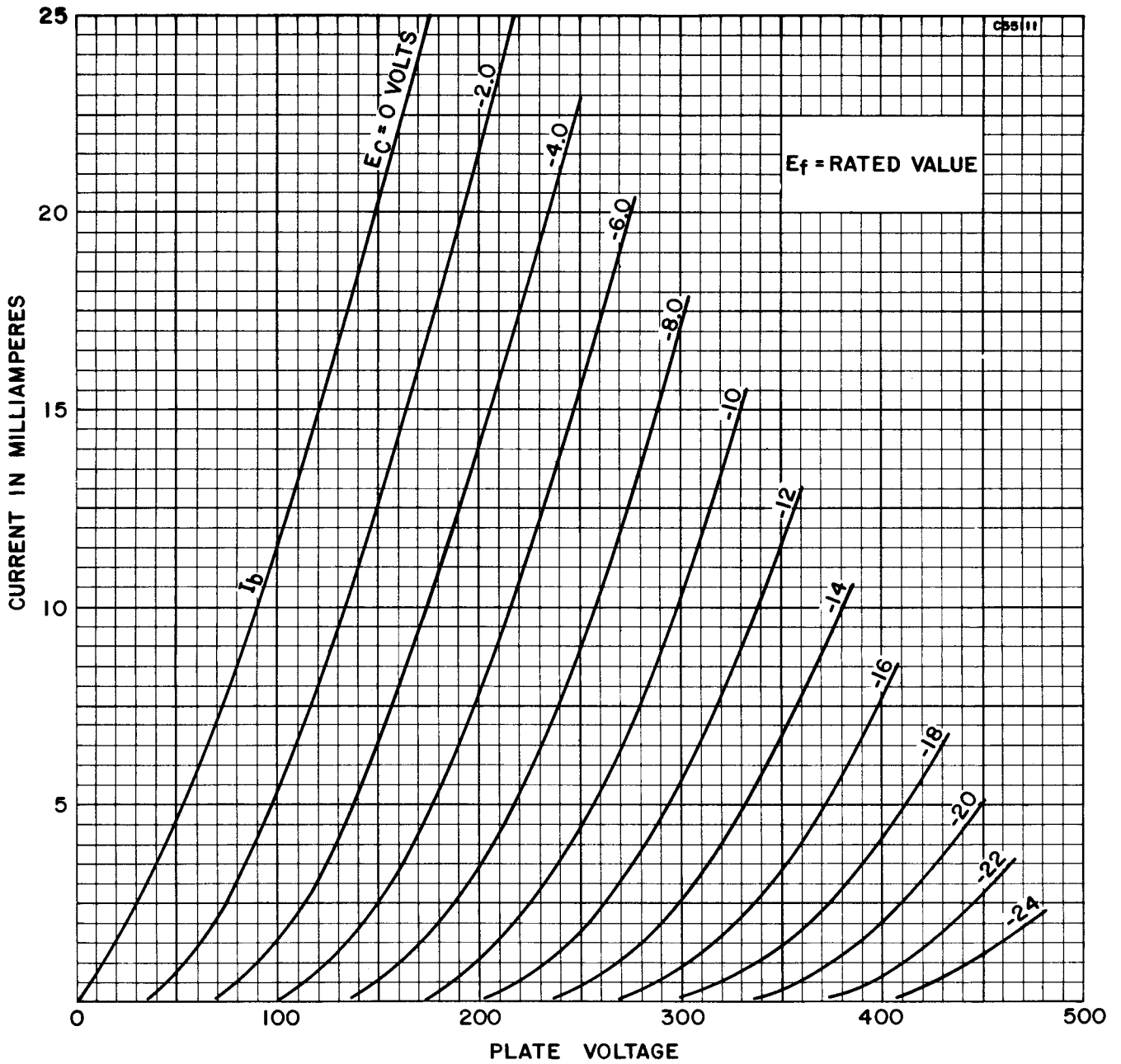
**Class A<sub>1</sub> Amplifier—Each Section**

Plate Voltage . . . . .	90	250 Volts
Grid Voltage . . . . .	0	-8.0 Volts
Plate Current . . . . .	10	9.0 Ma
Transconductance . . . . .	3000	2600 $\mu$ mhos
Amplification Factor . . . . .	20	20
Plate Resistance (Approx.) . . . . .	6700	7700 Ohms
Plate Current at $E_c = 12.5$ Volts . . . . .		1.3 Ma
Grid Voltage for $I_b = 10 \mu a$ (Approx.) . . . . .	-7.0	-18 Volts

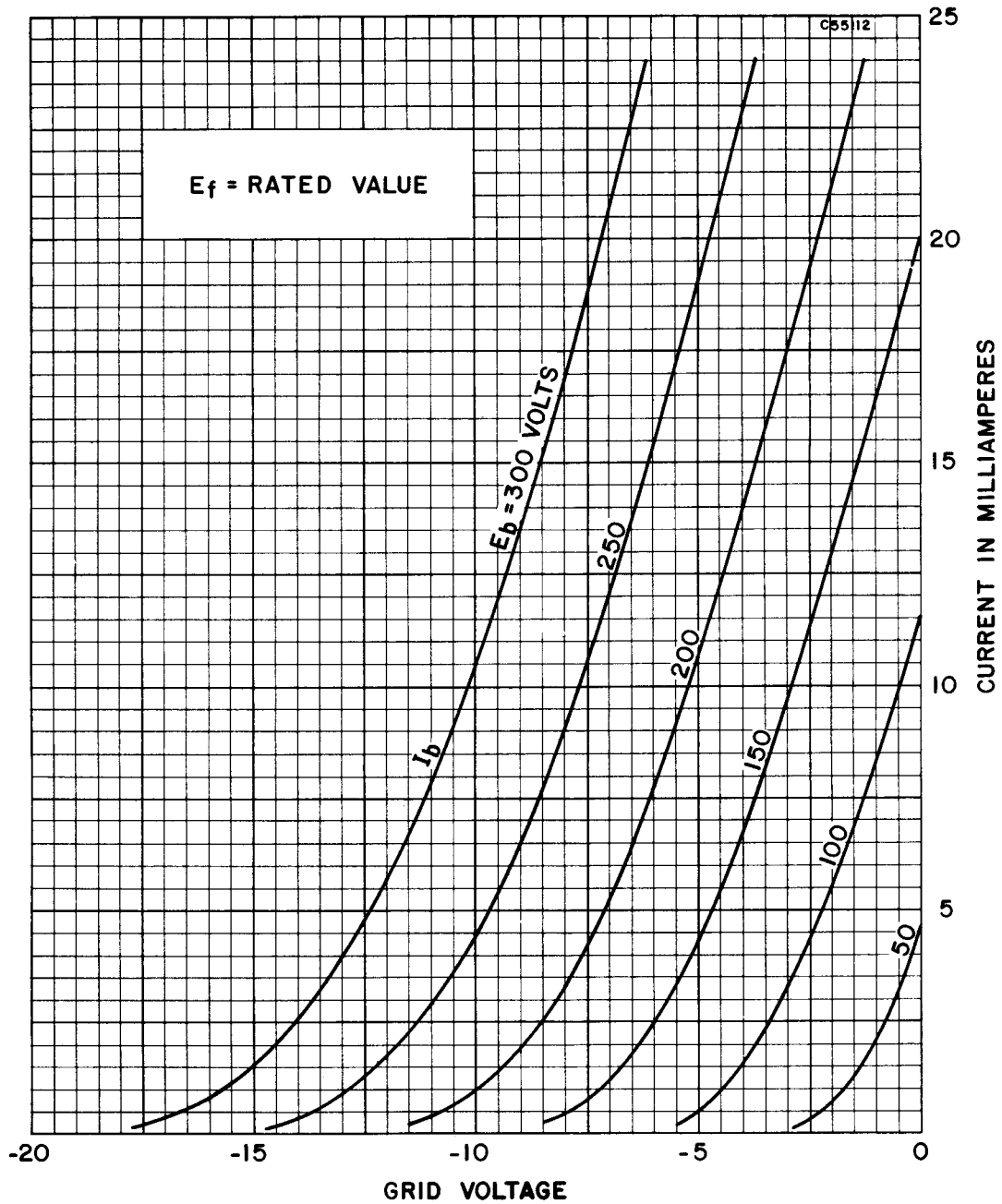
**NOTES:**

1. *Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of the rated heater voltage after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times the rated heater voltage divided by the rated heater current.*
2. *Section No. 1 connects to pins 4, 5 and 6. Section No. 2 connects to pins 1, 2 and 3.*
3. *For operation in a 525 line, 30 frame system as described in "Standards of Good Engineering Practice for Television Broadcasting Stations; Federal Communications Commission." The duty cycle of the voltage pulse must not exceed 15% of one scanning cycle.*

AVERAGE PLATE CHARACTERISTICS  
(EACH SECTION)



AVERAGE TRANSFER CHARACTERISTICS  
(EACH SECTION)



**AVERAGE TRANSFER CHARACTERISTICS**  
 (EACH SECTION)

