

**MECHANICAL DATA**

Bulb . . . . .	T-6 1/2
Base . . . . .	E9-1, Miniature Button, 9-Pin
Outline . . . . .	6-3
Basing . . . . .	9HN
Cathode . . . . .	Coated Unipotential
Mounting Position . . . . .	Any

**ELECTRICAL DATA**

**HEATER CHARACTERISTICS**

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

**DIRECT INTERELECTRODE CAPACITANCES**

Grid No. 1 to Plate . . . . .	0.7 $\mu$ mf	Max.
Input: g1 to (k+h+g3+g2) . . . . .	8 $\mu$ mf	
Output: p to (k+h+g3+g2) . . . . .	8.5 $\mu$ mf	

**RATINGS (Design Center Values—Except as Noted)<sup>2</sup>**

	Vertical Defl. Amp.	Class A <sub>1</sub> Power Amp.	
DC Plate Voltage . . . . .	315	350 Volts	Max.
Peak Positive Plate Voltage (Abs. Max.) . . . . .	2200 <sup>s</sup>	Volts	Max.
DC Grid No. 2 Voltage . . . . .	285	285 Volts	Max.
Peak Negative Grid No. 1 Voltage . . . . .	250	Volts	Max.
Plate Dissipation . . . . .	10	12 Watts	Max.
Grid No. 2 Input . . . . .	2	2 Watts	Max.
Average Cathode Current . . . . .	40	Ma	Max.
Peak Cathode Current . . . . .	140	Ma	Max.
Grid No. 1 Circuit Resistance			
Fixed Bias . . . . .	0.5	0.1 Megohm	Max.
Cathode Bias . . . . .	1	1 Megohm	Max.
Bulb Temperature (At Hottest Point) . . . . .	250°	250° C	Max.

**CHARACTERISTICS**

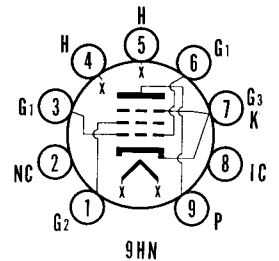
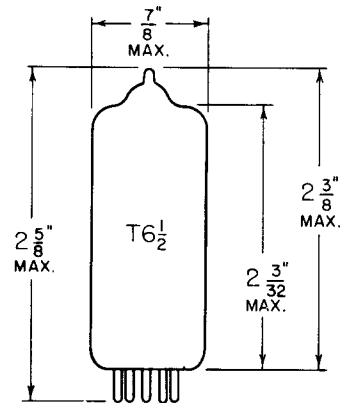
Plate Voltage . . . . .	250 Volts
Grid No. 2 Voltage . . . . .	250 Volts
Grid No. 1 Voltage . . . . .	-14 Volts
Plate Current . . . . .	46 Ma
Grid No. 2 Current . . . . .	4.6 Ma
Transconductance . . . . .	4800 $\mu$ mhos
Plate Resistance (approx.) . . . . .	73,000 Ohms
Grid No. 1 Voltage for I <sub>b</sub> = 100 $\mu$ a (approx.) . . . . .	-35 Volts

Instantaneous Plate Knee Values  
 E<sub>b</sub> = 70 Volts, E<sub>c2</sub> = 250 Volts, E<sub>c1</sub> = 0 Volts  
 I<sub>b</sub> = 130 Ma, I<sub>c2</sub> = 16 Ma

**QUICK REFERENCE DATA**

The Sylvania Type 6CZ5 is a miniature, beam pentode intended primarily for use as a vertical deflection amplifier or audio amplifier.

The 6CZ5 has controlled heater warm-up time for series string operation.



**SYLVANIA ELECTRIC PRODUCTS INC.**

**RADIO TUBE DIVISION EMPORIUM, PA.**

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TYPICAL OPERATION

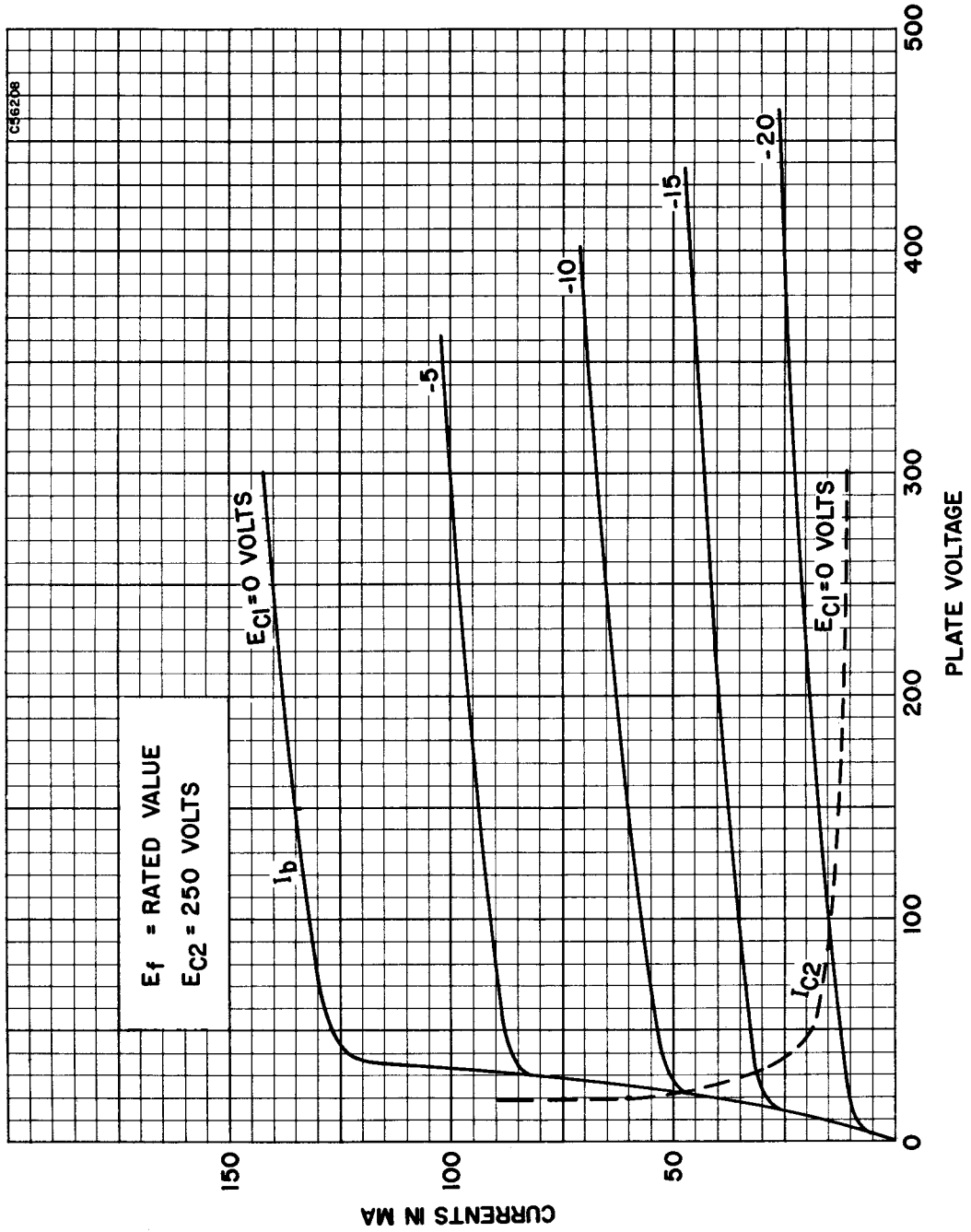
AF Power Amplifier

	Single Tube Class A <sub>1</sub>	Push Pull Class AB <sub>1</sub>
Plate Voltage . . . . .	250	350 Volts
Grid No. 2 Voltage . . . . .	250	280 Volts
Grid No. 1 Voltage . . . . .	-14	-23.5 Volts
Peak AF Grid No. 1 Voltage . . . . .	13	Volts
Peak AF Grid to Grid Voltage <sup>4,5</sup> . . . . .		47 Volts
Zero Signal Plate Current . . . . .	46	46 Ma
Max. Signal Plate Current . . . . .	48	103 Ma
Zero Signal Grid No. 2 Current . . . . .	4.6	3 Ma
Max. Signal Grid No. 2 Current . . . . .	8	13 Ma
Transconductance . . . . .	4800	μmhos
Load Resistance . . . . .	5000	Ohms
Load Resistance (Plate to Plate) . . . . .		7500 Ohms
Power Output . . . . .	5.4	21.5 Watts
Total Harmonic Distortion . . . . .	10	1 %

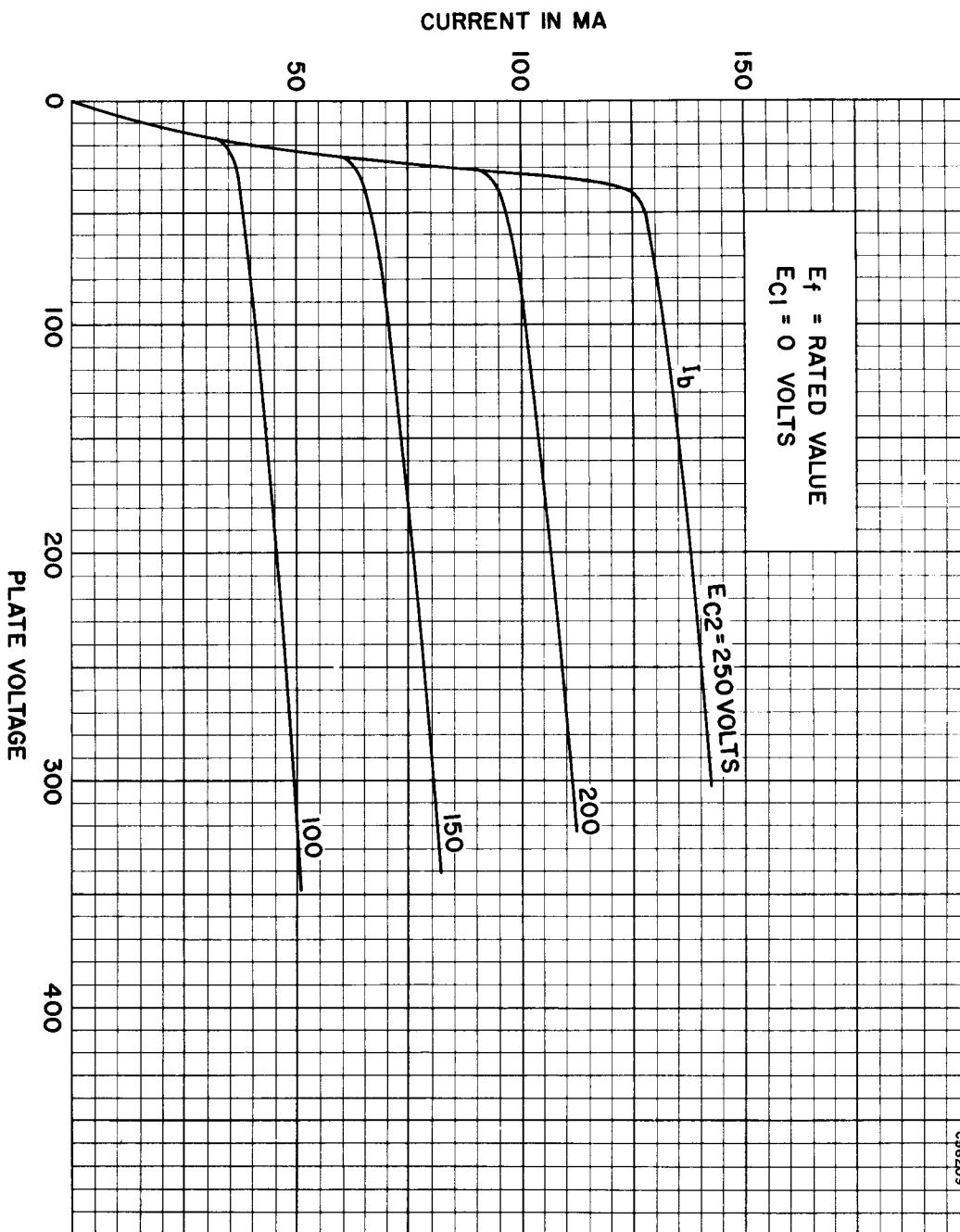
NOTES:

1. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of its rated value 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 rated heater voltage divided by rated heater current.
2. For operation in a 525-line, 30-frame system as described in "Standards of Good Engineering Practice for Television Broadcast Stations; Federal Communications Commission", the duty cycle of the pulse must not exceed 15% of one scanning cycle.
3. Under no circumstances should this absolute value be exceeded.
4. No Grid No. 1 Current should flow during any part of the input cycle.
5. Low resistance is required by the Grid No. 1 circuit such as transformer or impedance coupling devices.

AVERAGE PLATE CHARACTERISTICS



## AVERAGE PLATE CHARACTERISTICS



C56209

AVERAGE TRANSFER CHARACTERISTICS

