

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 ¹	11 Seconds	
Heater-Cathode Voltage (Design Center Values)		
Heater Negative with Respect to Cathode		
Total DC and Peak	200 Volts	Max.
Heater Positive with Respect to Cathode		
DC	100 Volts	Max.
Total DC and Peak	200 Volts	Max.

DIRECT INTERELECTRODE CAPACITANCES

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

RATINGS (Design Center Values—Except as Noted)²

	Vertical Defl. Amp.	Class A ₁ Power Amp.	
DC Plate Voltage	315	350 Volts	Max.
Peak Positive Plate Voltage (Abs. Max.)	2200 ³	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 μ mhos
Plate Resistance (approx.)	73,000 Ohms
Grid No. 1 Voltage for Ib = 100 μ a (approx.)	-35 Volts

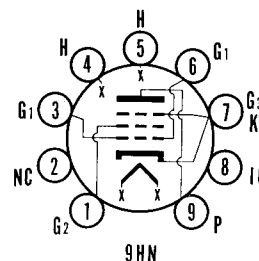
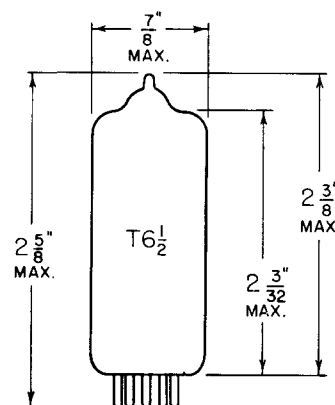
Instantaneous Plate Knee Values

Eb = 70 Volts, Ec2 = 250 Volts, Ec1 = 0 Volts
Ib = 130 Ma, Ic2 = 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

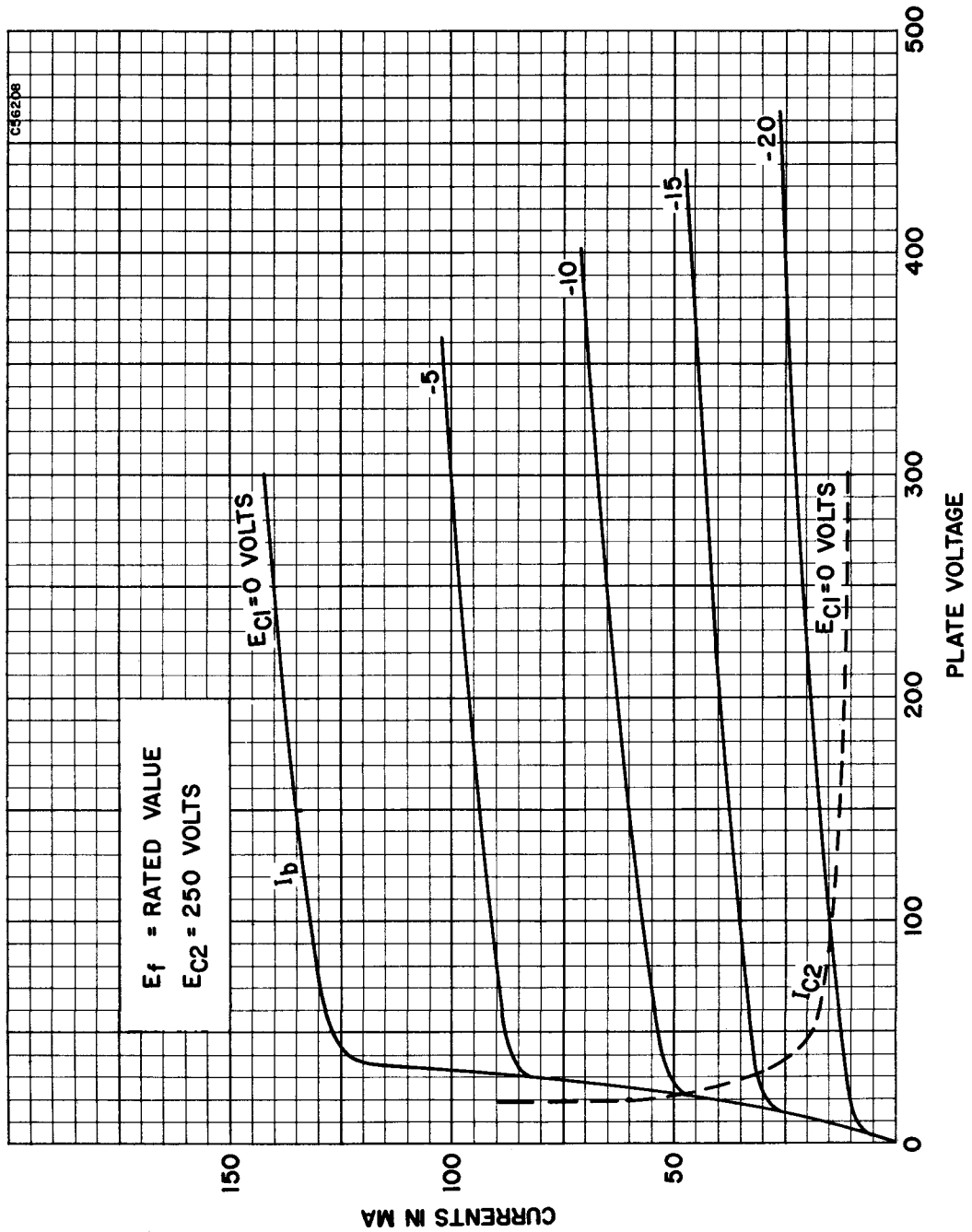
AF Power Amplifier

	Single Tube Class A ₁	Push Pull Class AB ₁
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 ^{4, 5}		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 %

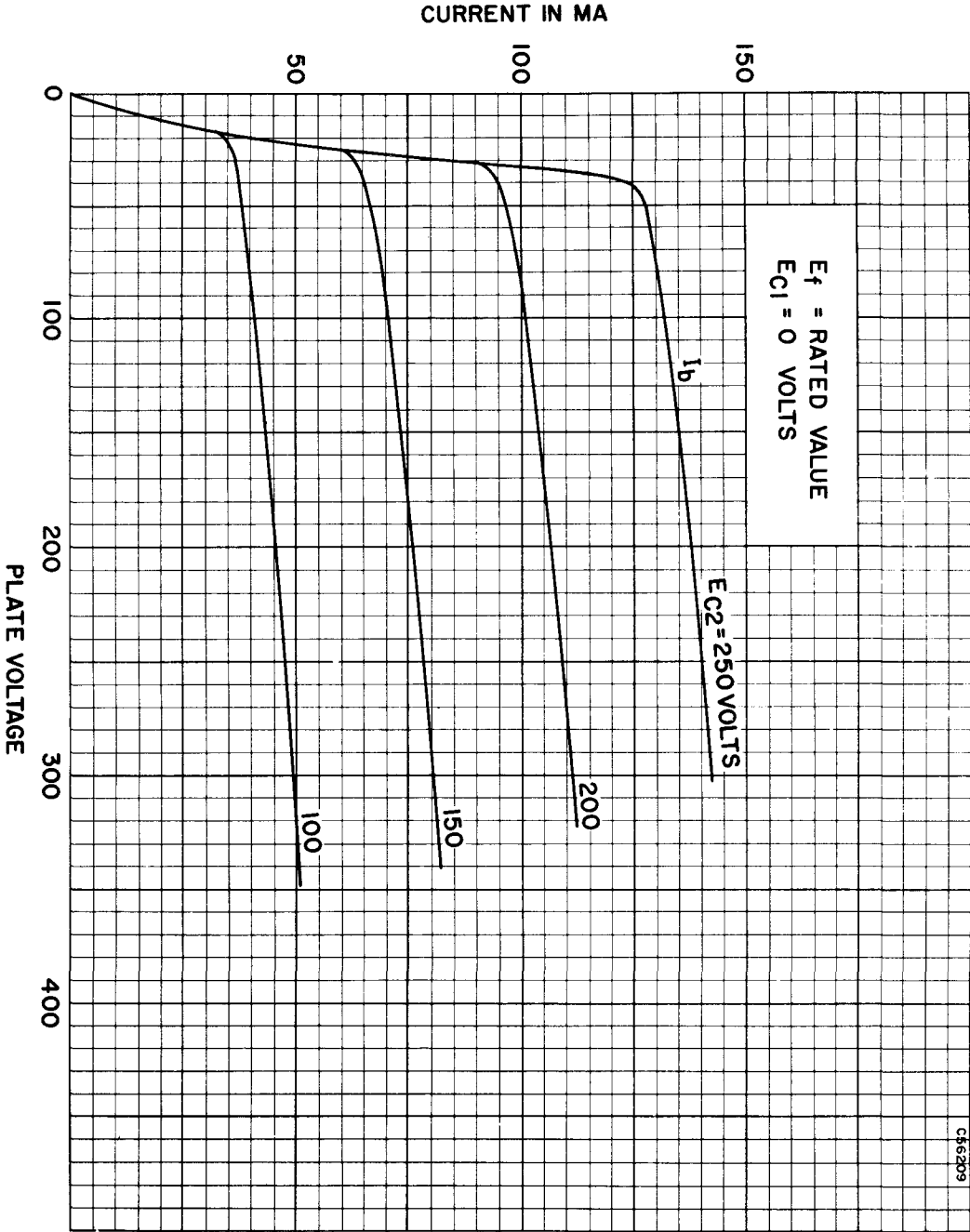
NOTES:

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



AVERAGE TRANSFER CHARACTERISTICS

