

MECHANICAL DATA

Bulb	T-12
Base	B8-118, Short Medium Shell Octal, 8-Pin
Outline	(See Drawing)
Basing	5BT
Top Cap	C1-1 Small
Cathode	Coated Unipotential
Mounting Position	Vertical ¹

ELECTRICAL DATA

HEATER CHARACTERISTICS	6DN6	25DN6
Heater Voltage	6.3	25.0 Volts
Heater Current	2.5	0.60 Amperes
Heater Warm-up Time ²		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 (Approx.)

Grid No. 1 to Plate	0.8 μmf
Input	22 μmf
Output	11.5 μmf

RATINGS (Design Center Values — Except as Noted)

Horizontal Deflection Amplifier³

DC Plate Supply Voltage (Boost + DC Power Supply)	700 Volts	Max.
Peak Positive Pulse Plate Voltage (Abs. Max.)	6600 Volts	
Peak Negative Pulse Plate Voltage	1500 Volts	Max.
Plate Dissipation ⁴	15 Watts	Max.
Peak Negative Grid No. 1 Voltage	200 Volts	Max.
DC Grid No. 2 Voltage	175 Volts	Max.
Grid No. 2 Dissipation	3.0 Watts	Max.
Average Cathode Current	200 Ma	Max.
Peak Cathode Current	700 Ma	Max.
Grid No. 1 Circuit Resistance	0.47 Megohm	Max.
Bulb Temperature (At Hottest Point)	225 °C	Max.

AVERAGE CHARACTERISTICS

Pentode Operation: With $E_b = 125$ v, $E_{c2} = 125$ v and $E_{c1} = -18$ v	
Plate Current	70 Ma
Grid No. 2 Current	6.3 Ma
Transconductance	9000 μmhos
Plate Resistance (approx.)	4000 Ohms

Zero Bias: With $E_b = 50$ v, $E_{c2} = 100$ v and $E_{c1} = 0$ v
(Instantaneous Values)

Plate Current	240 Ma
Grid No. 2 Current	30 Ma

Cutoff: For $I_b = 0.5$ ma with $E_b = 125$ v and $E_{c2} = 125$ v
Grid No. 1 Voltage (approx.) -36 Volts

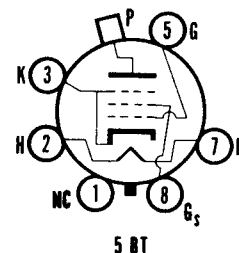
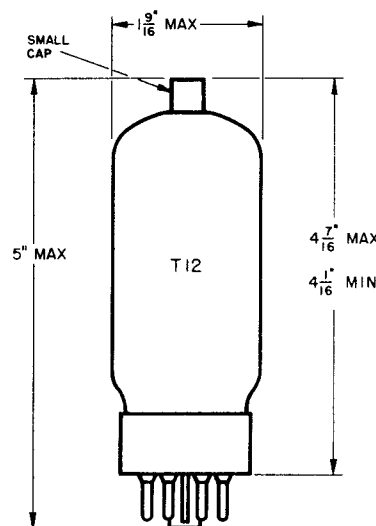
Triode Amplification Factor:

With	
$E_b = E_{c2} = 125$ v and $E_{c1} = -18$ v	4.35

QUICK REFERENCE DATA

The Sylvania Type 6DN6 and 25DN6 is a beam power amplifier designed for use as a horizontal deflection amplifier in television receivers having low B supply voltages. This type exhibits an extremely low plate knee characteristic at zero bias.

The 25DN6 features a 25.0 volt, 600 Ma heater and controlled heater warm-up time for series string operation. Except for heater characteristics the 25DN6 is identical to the 6DN6.



SYLVANIA ELECTRIC
PRODUCTS INC.

RADIO TUBE DIVISION
EMPORIUM, PA.

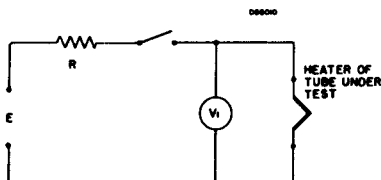
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NOTES:

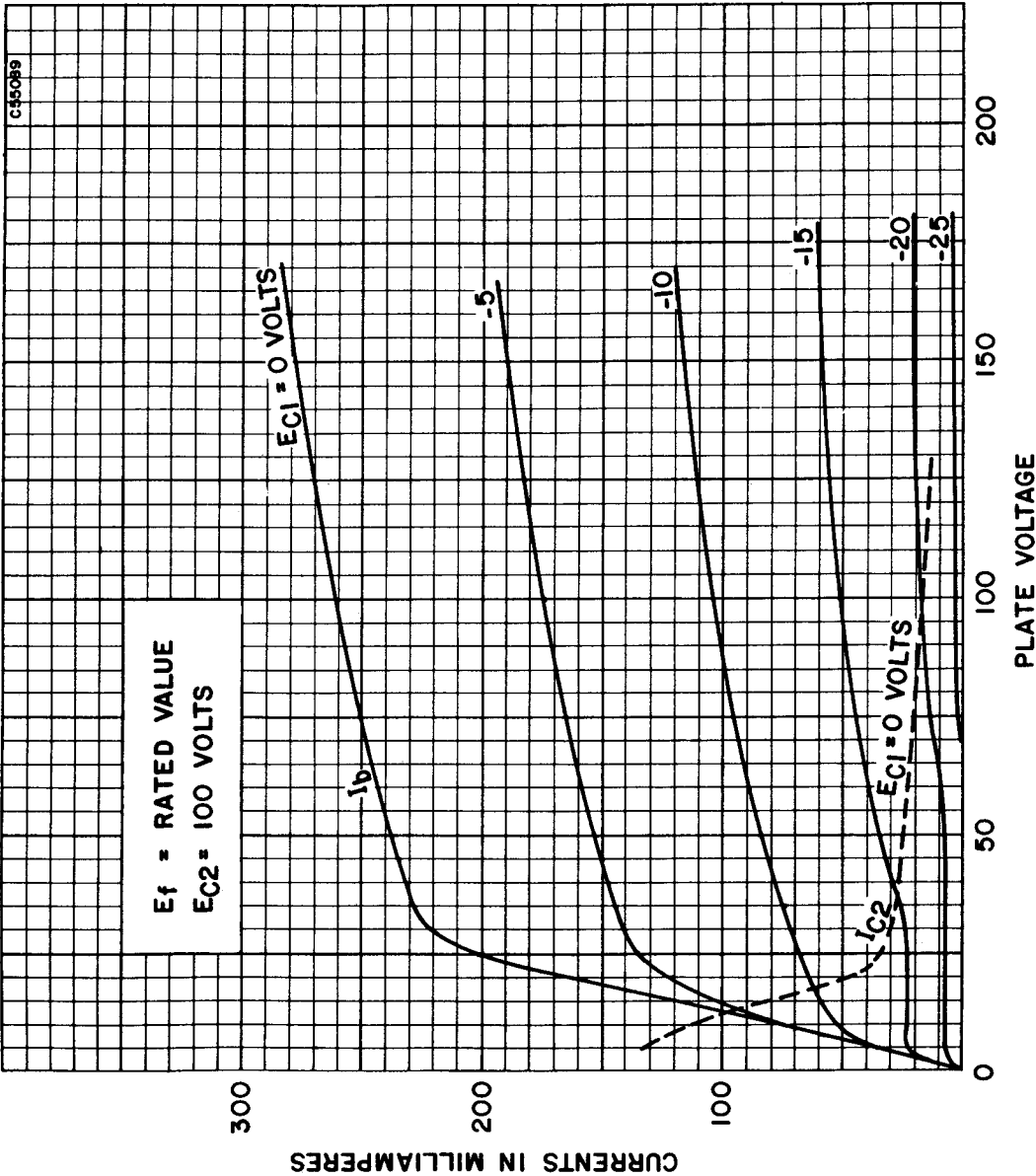
1. Horizontal operation permitted if plane of Pins 1 and 3 is vertical.
2. Heater Warm-up Time is defined as the time required in the circuit shown below for the voltage across the heater terminals to increase from zero to the heater test voltage (V_1). The conditions used in conjunction with the test circuit depend upon the rated heater voltage and current of the tube under test. For this type: $E = 100$ Volts, $R = 125$ Ohms, $V_1 = 20$ Volts.



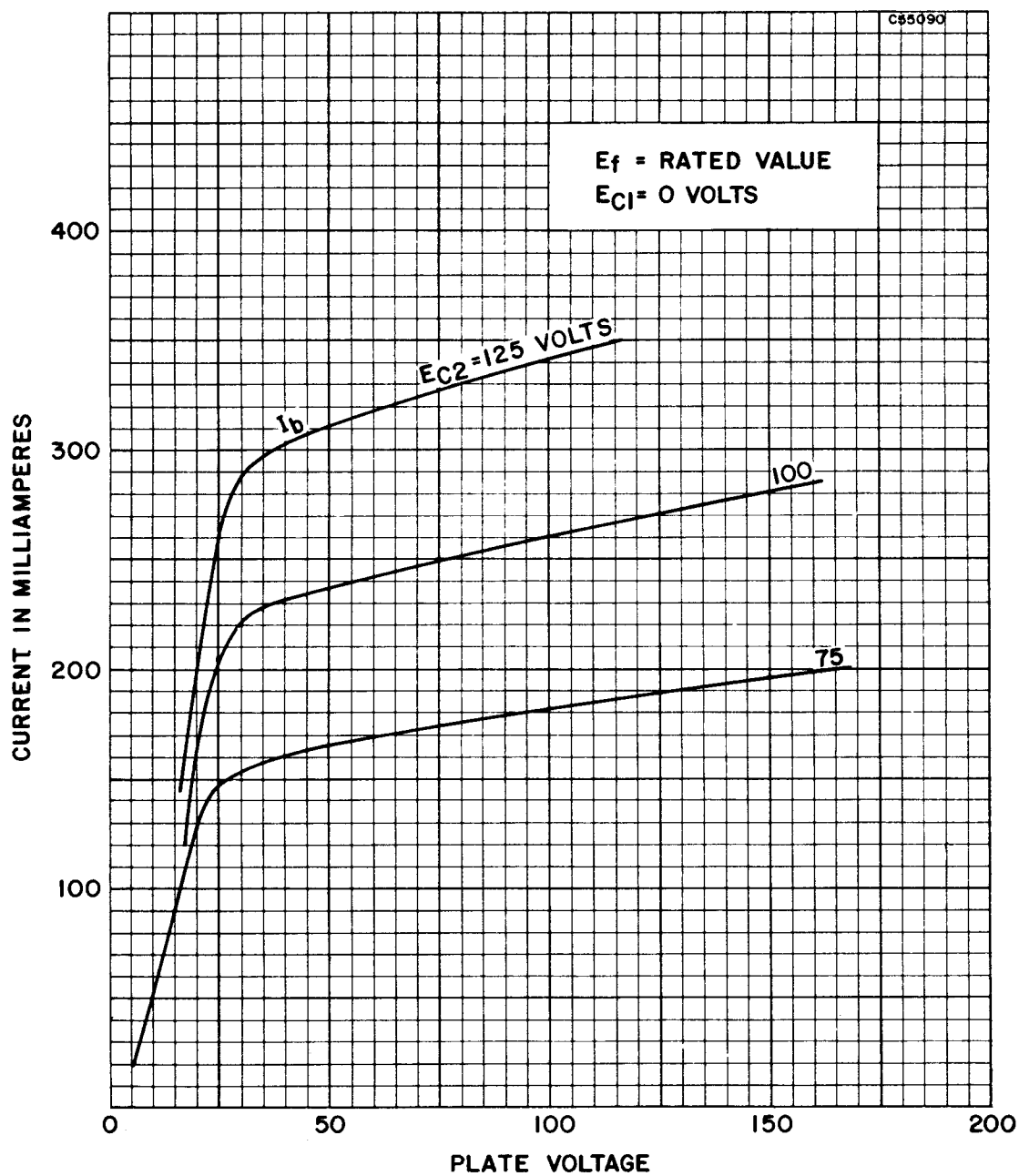
E — Applied Voltage, RMS or DC
 R — Total Series Resistance
 V_1 — Heater Test Voltage, RMS or DC
(80% Rated Heater Voltage)

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.
4. In stages operating with grid leak bias, an adequate cathode bias resistor or other suitable means is required to protect the tube in the absence of excitation.

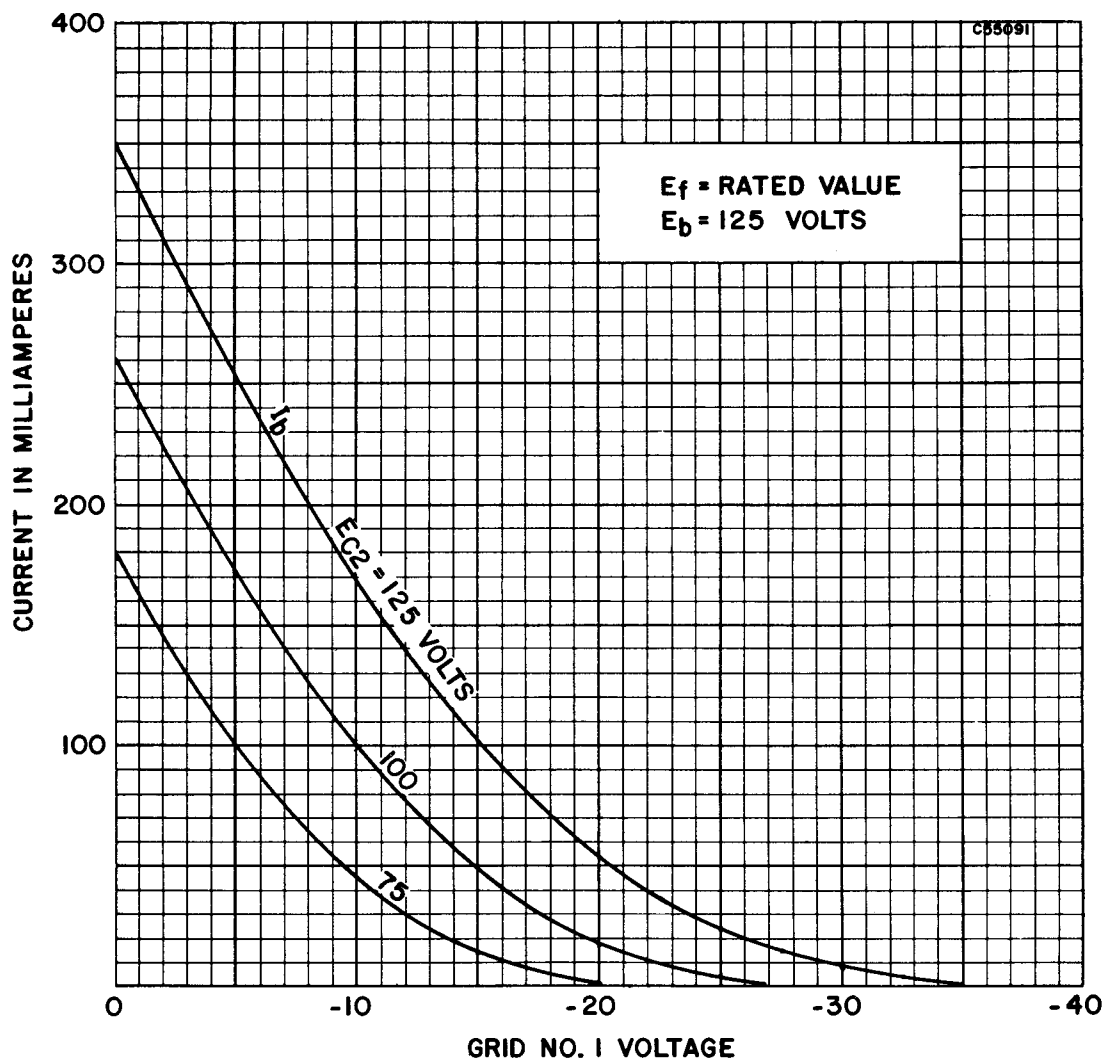
AVERAGE PLATE CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



6X4

$E_f = \text{RATED VALUE}$
 $E_b = 125 \text{ VOLTS}$

Y-axis: CURRENT IN MILLIAMPERES (0 to 25)
 X-axis: GRID NO. 1 VOLTAGE (0 to -40)

Curves are labeled for plate voltages: 150, 100, and 75.