MECHANICAL DATA

Bulb	T-6½
Base	E9-1, Small Button 9-Pin
Outline	6-3
Basing	9ER
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage	6.3	Volts
Heater Current	600	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 (Unshielded)

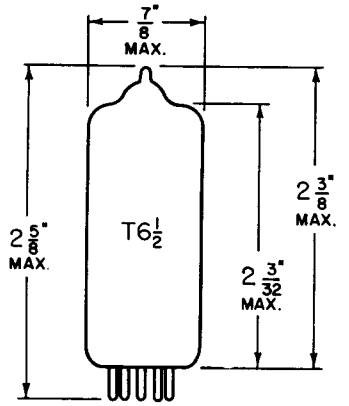
Triode		
Grid to Plate: (g to p)	2.6	μμf
Input: g to (h+tk)	2.8	μμf
Output: p to (h+tk)	0.38	μμf
No. 1 Diode Plate to Triode Grid	0.070	μμf Max.
No. 2 Diode Plate to Triode Grid	0.11	μμf Max.
No. 1 Diode Cathode to All:		
1dk to (h+tk+2dk+tp+1dp+tg+2dp)	4.8	μμf
No. 2 Diode Cathode to All:		
2dk to (h+tk+1dk+tp+1dp+2dp+tg)	4.8	μμf
No. 1 Diode Plate to No. 2 Diode Plate	0.060	μμf Max.
No. 1 Diode Plate to No. 1 Diode Cathode+Heater: 1dp to (1dk+h)	1.9	μμf
No. 2 Diode Plate to No. 2 Diode Cathode+Heater: 2dp to (2dk+h)	1.9	μμf
No. 1 Diode Cathode to No. 1 Diode Plate+Heater: 1dk to (1dp+h)	4.6	μμf
No. 2 Diode Cathode to No. 2 Diode Plate+Heater: 2dk to (2dp+h)	4.6	μμf
No. 1 Diode Plate to All:		
1dp to (h+tk+1dk+2dk+tp+2dp+tg)	3.0	μμf
No. 2 Diode Plate to All:		
2dp to (h+tk+1dk+2dk+tp+1dp+tg)	3.0	μμf

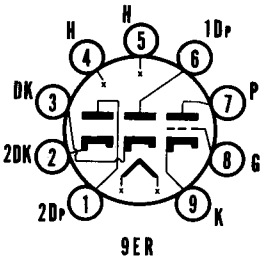
RATINGS — Each Section (Design Center Values — Except as Noted)

	Class A_1 Amplifier	Vertical Deflection Amplifier[2]	
Triode			
Plate Voltage	300	300	Volts Max.
Positive DC Grid Voltage	0		Volts Max.
Peak Positive Pulse Plate Voltage (Abs. Max.)		1200	Volts
Maximum Plate Dissipation[3]	3.5	3.5	Watts Max.
Peak Negative Pulse Grid Voltage		250	Volts Max.
Average Cathode Current	20	20	Ma Max.
Peak Cathode Current		70	Ma Max.
Grid Circuit Resistance	1.0		Megohm Max.
Self Bias		2.2	Megohms Max.
Diodes			
Peak Plate Current, Each Plate	54		Ma Max.
DC Current, Each Plate	9		Ma Max.

QUICK REFERENCE DATA

The Sylvania Type 6BJ8 is a miniature, medium mu triode, double diode intended for use as a phase splitter, phase comparator and horizontal deflection oscillator. The tube features controlled heater warm-up time to insure dependable operation in series string receivers and separate cathode connections for each section.





SYLVANIA ELECTRIC PRODUCTS INC.

RADIO TUBE DIVISION
EMPORIUM, PA.

Prepared and Released By The TECHNICAL PUBLICATIONS SECTION EMPORIUM, PENNSYLVANIA

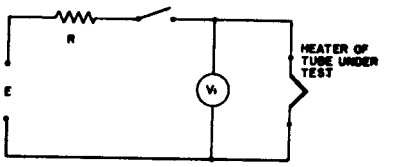
OCTOBER 1955

CHARACTERISTICS AND TYPICAL OPERATION

Triode: Class A_1 Amplifier		
Plate Voltage	90	250 Volts
Grid Voltage	0	−9 Volts
Plate Resistance (approx.)	4700	7150 Ohms
Transconductance	4700	2800 μmhos
Amplification Factor	22	20
Plate Current	13.5	8.0 Ma
Plate Current at E_c = −12.5 Volts DC		1.7 Ma
Grid Voltage (approx.) for I_b = 10 μa	−7	−18 Volts
Diodes		
Average Current Each Plate at 10 Volts DC		50 Ma
Voltage Drop Each Section at I_b = 9 Ma DC		2.6 Volts

NOTES:

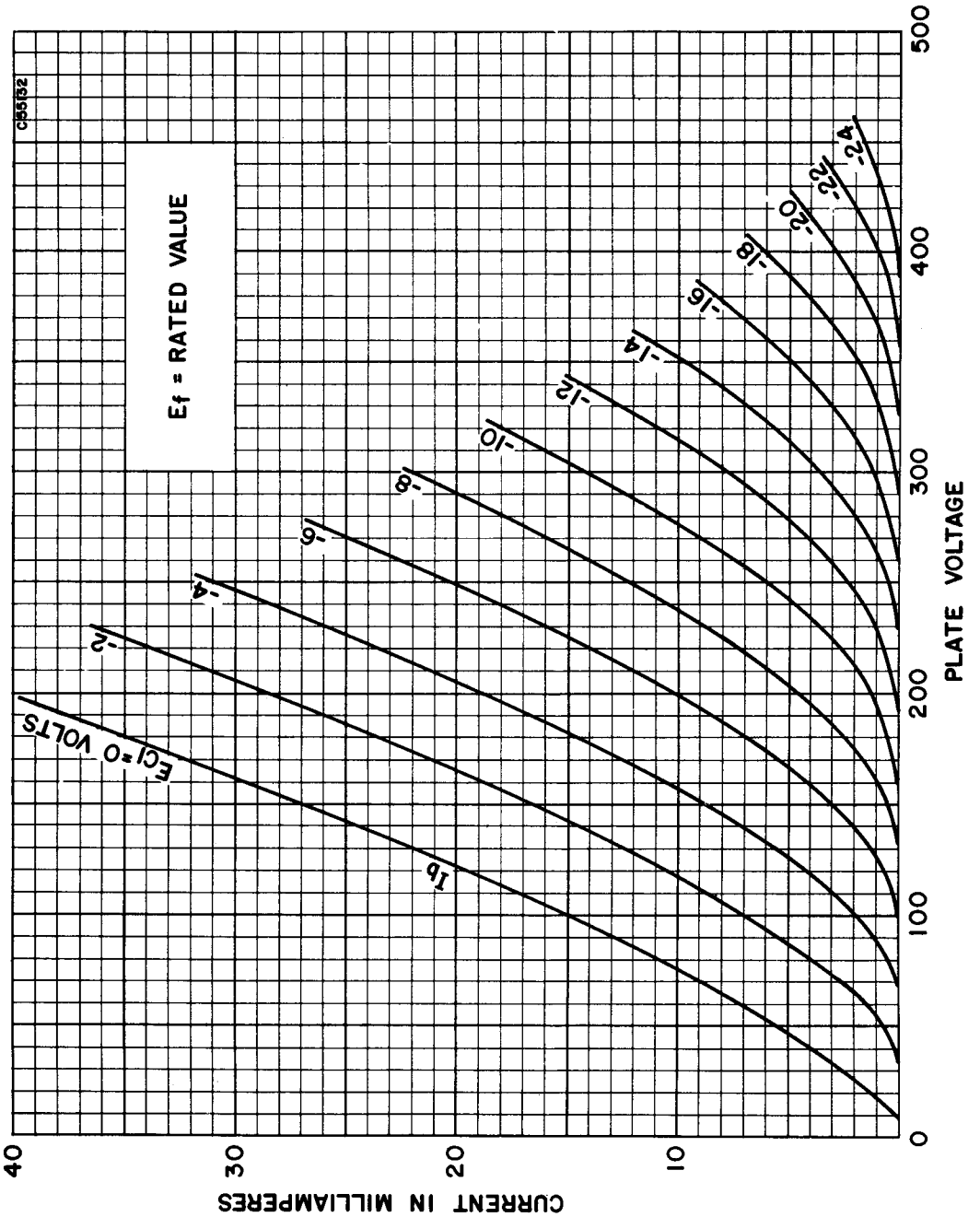
1. *Heater Warm-up Time is defined as the time required in the circuit shown below for the voltage across the heater terminals to increase from zero to the heater test voltage (V1). The conditions used in conjunction with the test circuit depend upon the rated heater voltage and current of the tube under test. For this type: E = 25 Volts, R = 31.5 Ohms, V1 = 5.0 Volts*



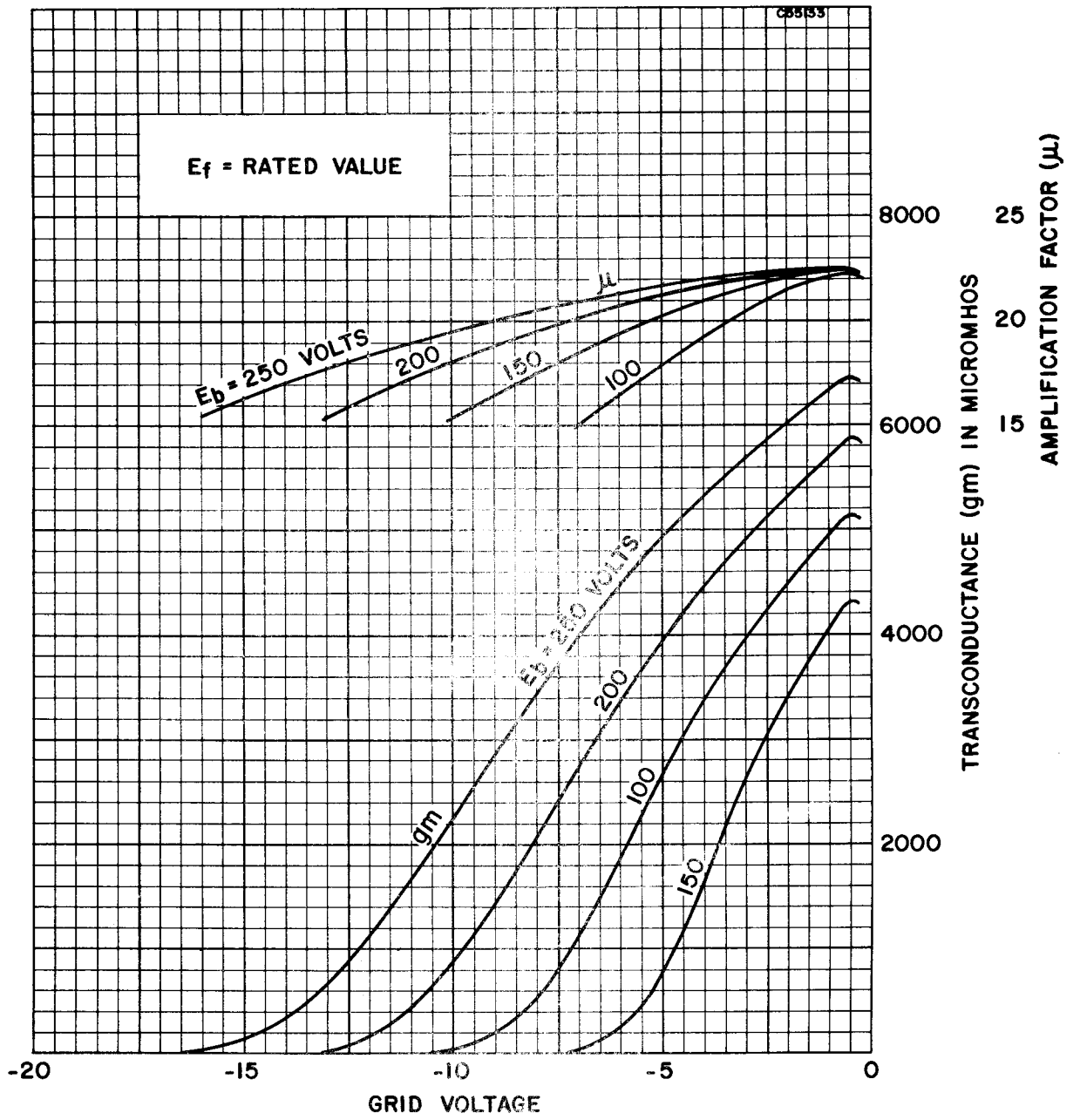
E — Applied Voltage, RMS or DC
R — Total Series Resistance
V1 — Heater Test Voltage, RMS or DC (80% Rated Heater Voltage)

2. *For operation in a 525 line, 30-frame system as described in "Standards of Good Engineering Practice for Television Stations; Federal Communications Commission". The duty cycle of the voltage pulse must not exceed 15% of one scanning cycle.*
3. *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 TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS