

## MECHANICAL DATA

|                             |                          |
|-----------------------------|--------------------------|
| Bulb . . . . .              | T-6½                     |
| Base . . . . .              | E9-1, Small Button 9-Pin |
| Outline . . . . .           | 6-2                      |
| Basing . . . . .            | 9FC                      |
| Cathode . . . . .           | Coated Unipotential      |
| Mounting Position . . . . . | Any                      |

## ELECTRICAL DATA

### HEATER CHARACTERISTICS

|                                               | 4CX7 | 6CX7           |
|-----------------------------------------------|------|----------------|
| Heater Voltage . . . . .                      | 4.2  | 6.3 Volts      |
| Heater Current . . . . .                      | 600  | 400 Ma         |
| Heater Warm-up Time <sup>1</sup> . . . . .    | 11   | Seconds        |
| Heater-Cathode Voltage (Design Center Values) |      |                |
| Heater Negative with Respect to Cathode       |      |                |
| Total DC and Peak <sup>2</sup> . . . . .      | 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 (Shielded)<sup>3</sup>

|                                                    | Section No. 1 | Section No. 2 |
|----------------------------------------------------|---------------|---------------|
| Grid to Plate: (g to p) . . . . .                  | 1.2           | μμf           |
| Input: g to (h+k+e.s.) . . . . .                   | 2.4           | μμf           |
| Output: p to (h+k+e.s.) . . . . .                  | 1.3           | μμf           |
| Heater to Cathode: (h to k) <sup>4</sup> . . . . . | 2.4           | 2.2 μμf       |
| Plate to Cathode: (p to k) . . . . .               | 0.17          | 0.17 μμf Max. |
| No. 2 Plate to No. 1 Plate and No. 1 Grid:         |               |               |
| No. 2 p to (No. 1 p+No. 1 g) . . . . .             | 0.027         | μμf Max.      |
| Plate to Plate: (No. 1 p to No. 2 p) . . . . .     | 0.017         | μμf Max.      |
| Grounded Grid Operation:                           |               |               |
| Input: k to (g+i.s.+h+e.s.) . . . . .              |               | 4.2 μμf       |
| Output: p to (g+i.s.+h+e.s.) . . . . .             |               | 1.7 μμf       |

### RATINGS (Design Center Values — Each Section)

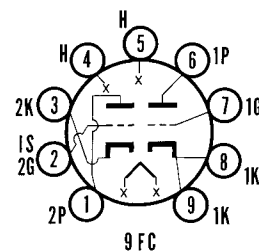
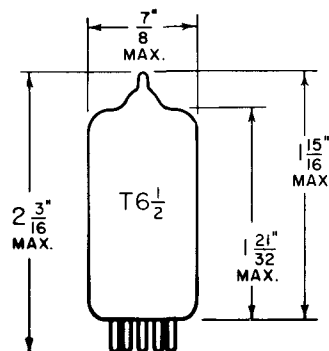
|                                      |                 |
|--------------------------------------|-----------------|
| Plate Voltage <sup>2</sup> . . . . . | 250 Volts Max.  |
| Plate Dissipation . . . . .          | 2 Watts Max.    |
| Cathode Current . . . . .            | 20 Ma Max.      |
| Grid Circuit Resistance . . . . .    | 0.5 Megohm Max. |

### CHARACTERISTICS — Class A<sub>1</sub> Amplifier (Each Section)

|                                                             |            |
|-------------------------------------------------------------|------------|
| Plate Voltage . . . . .                                     | 150 Volts  |
| Grid Voltage . . . . .                                      | 0 Volts    |
| Cathode Bias Resistor . . . . .                             | 220 Ohms   |
| Plate Current . . . . .                                     | 9.0 Ma     |
| Transconductance . . . . .                                  | 6400 μmhos |
| Amplification Factor . . . . .                              | 39         |
| Grid Voltage for I <sub>b</sub> = 10 μa (approx.) . . . . . | -10 Volts  |

## QUICK REFERENCE DATA

The Sylvania Types 4CX7 and 6CX7 are miniature medium mu twin triodes designed for operation as cascode (vhf) amplifiers. The 4CX7 features a 600 ma heater and controlled heater warm-up time for service in television receivers employing a series heater string.



SYLVANIA ELECTRIC  
PRODUCTS INC.

RADIO TUBE DIVISION  
EMPORIUM, PA.

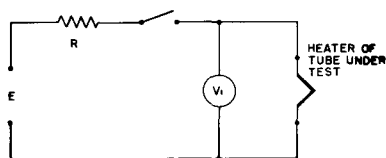
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JANUARY 1956

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## NOTES:

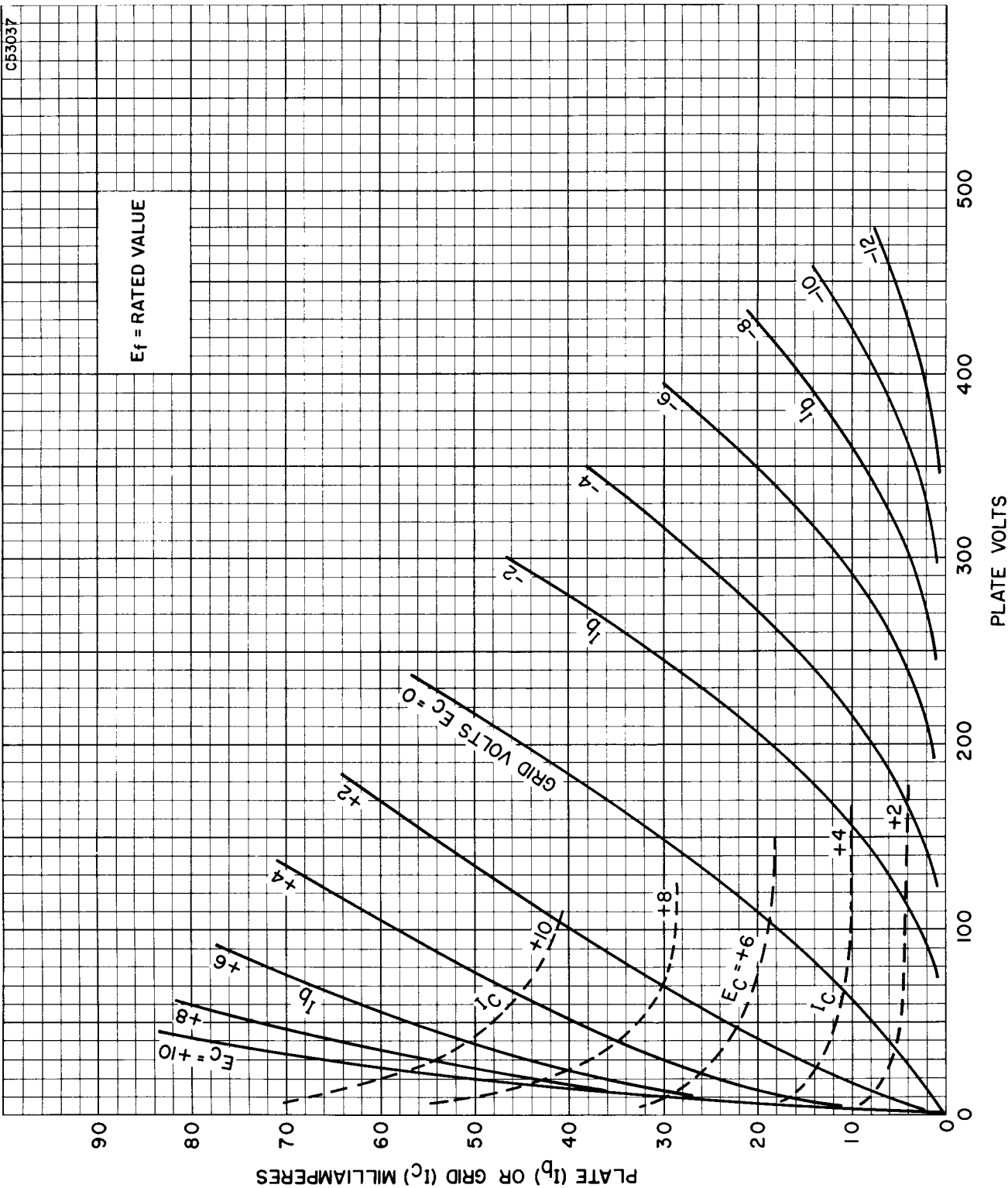
1. *Heater Warm-up Time is defined as the time required in the circuit shown below for the voltage across the heater terminals to increase from zero to the heater test voltage ( $V_1$ ). The conditions used in conjunction with the test circuit depend upon the rated heater voltage and current of the tube under test. For this type:  $E = 16.8$  Volts,  $R = 21.0$  Ohms,  $V_1 = 3.33$  Volts.*



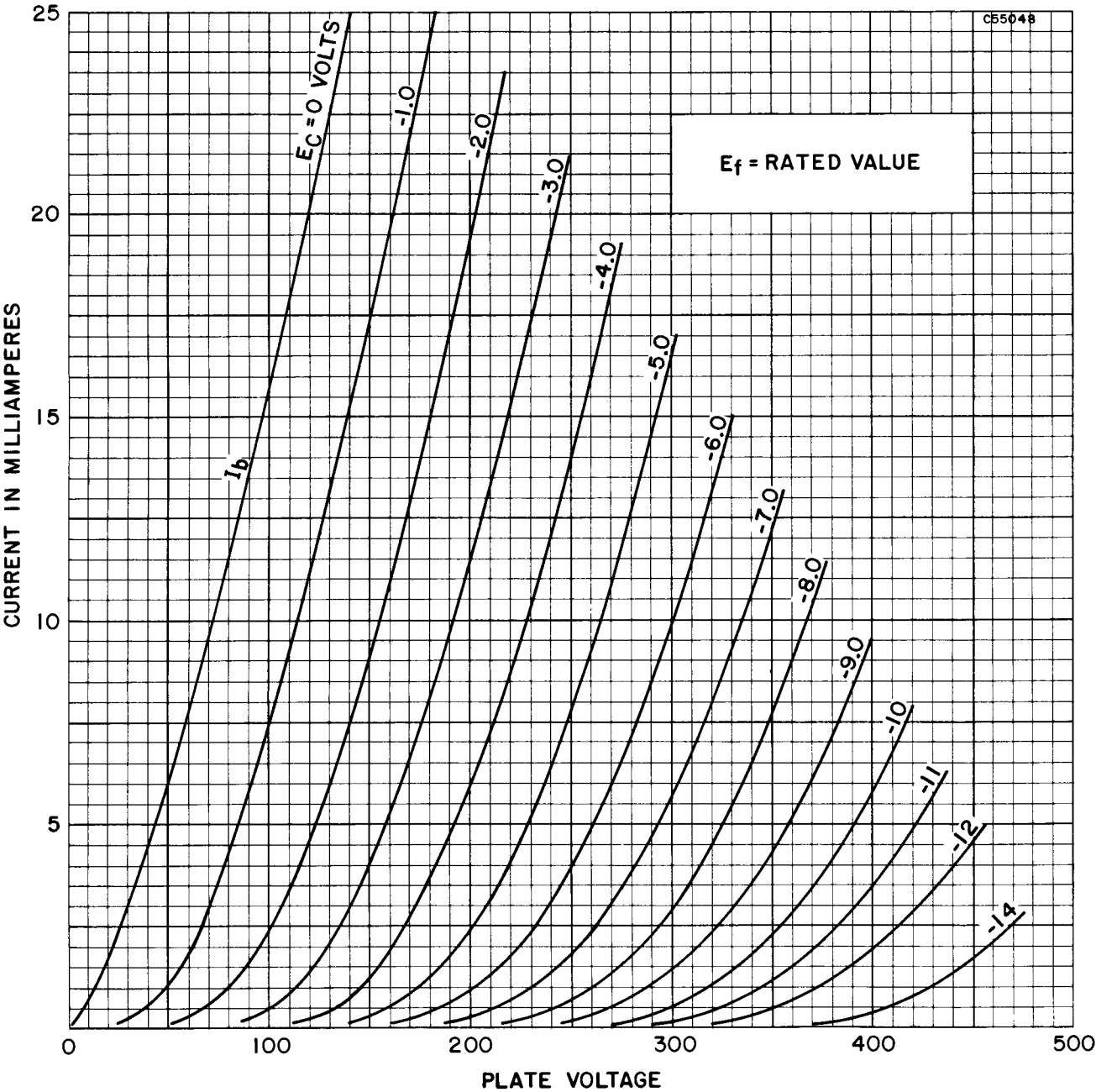
$E$  — Applied Voltage, RMS or DC  
 $R$  — Total Series Resistance  
 $V_1$  — Heater Test Voltage, RMS or DC  
(80% Rated Heater Voltage)

2. *Under cutoff conditions when the tube is used as a cascode amplifier, this rating may be as high as 300 volts maximum.*
3. *Shield No. 315 connected to heater unless specified differently.*
4. *Shield No. 315 connected to ground.*

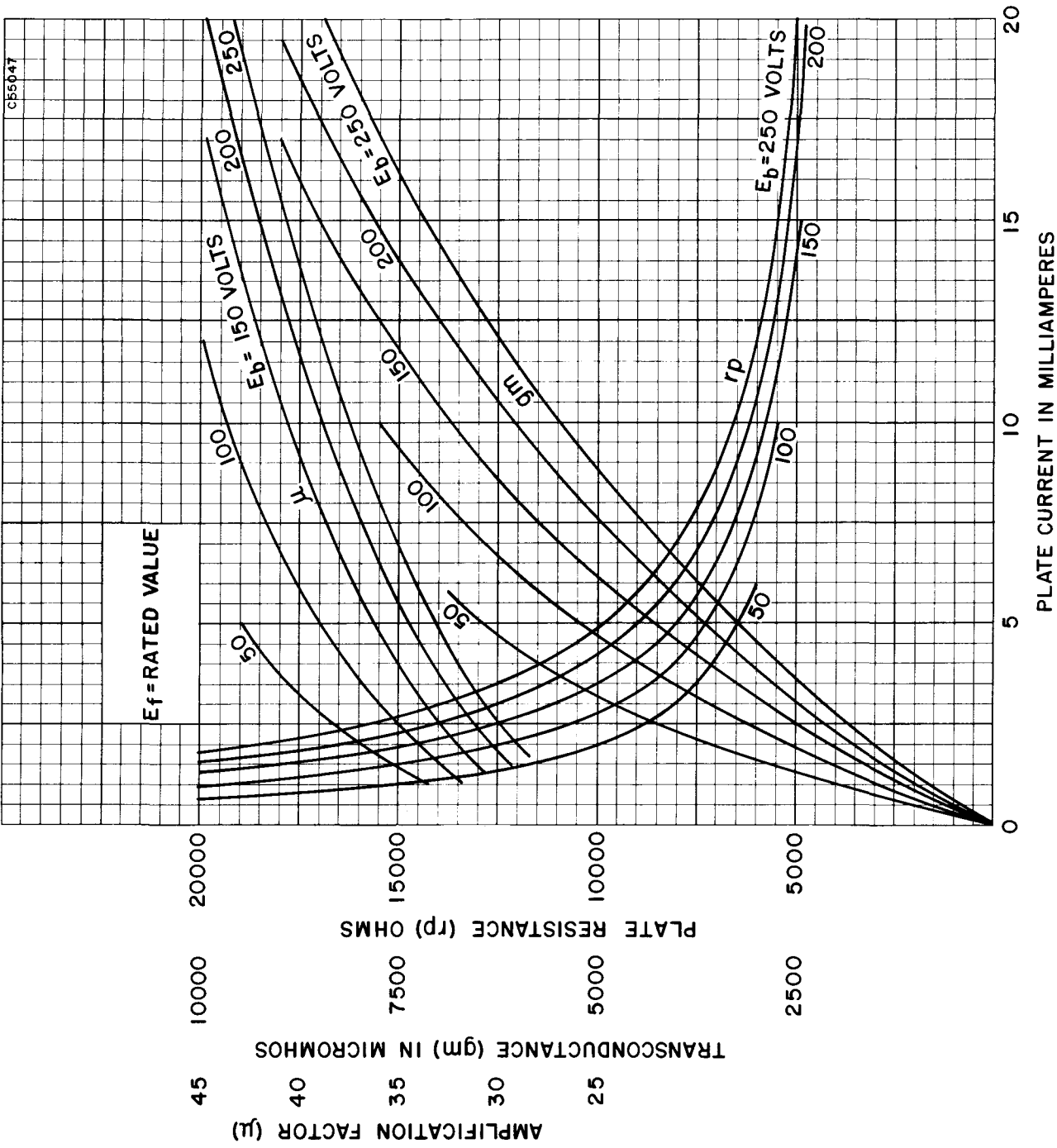
AVERAGE PLATE CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS

