

### DESCRIPTION AND RATING

The 18FW6 is a miniature, semi-remote-cutoff pentode designed for RF and IF amplifier service in line-operated radio receivers having 100-milliamperere, series-connected heaters.

#### GENERAL

##### ELECTRICAL

Cathode—Coated Unipotential

Heater Voltage, AC or DC. . . . .  $18 \pm 10\%$  Volts

Heater Current. . . . . 0.1 Amperes

Direct Interelectrode Capacitances\*

Grid-Number 1 to Plate: (g1 to p) . . . . . 0.0035  $\mu\text{mf}$

Input: G1 to (H+K+G2+G3) . . . . . 5.5  $\mu\text{mf}$

Output: P to (H+K+G2+G3) . . . . . 5.0  $\mu\text{mf}$

##### MECHANICAL

Mounting Position—Any

Envelope—T-5½, Glass

Base—E7-1, Miniature Button 7-Pin

#### MAXIMUM RATINGS

##### DESIGN-MAXIMUM VALUES

Plate Voltage. . . . . 150 Volts

Screen-Supply Voltage . . . . . 150 Volts

Screen Voltage—See Screen Rating Chart

Plate Dissipation. . . . . 2.5 Watts

Screen Dissipation. . . . . 0.6 Watts

Heater-Cathode Voltage

Heater Positive with Respect to Cathode. . . . . 100 Volts

Heater Negative with Respect to Cathode. . . . . 100 Volts

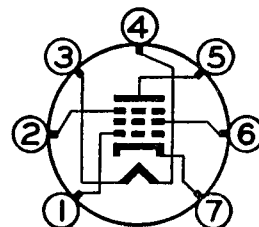
Design-Maximum ratings are limiting values of operating and environmental conditions applicable to a bogey tube of a specified type as defined by its published data, and should not be exceeded under the worst probable conditions.

These values are chosen by the tube manufacturer to provide acceptable serviceability of the tube, taking responsibility for the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration.

The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, variation in characteristics of all other tubes in the equipment, equipment control adjustment, load variation, signal variation, and environmental conditions.

The tubes and arrangements disclosed herein may be covered by patents of General Electric Company or others. Neither the disclosure of any information herein nor the sale of tubes by General Electric Company conveys any license under patent claims covering combinations of tubes with other devices or elements. In the absence of an express written agreement to the contrary, General Electric Company assumes no liability for patent infringement arising out of any use of the tubes with other devices or elements by any purchaser of tubes or others.

#### BASING DIAGRAM

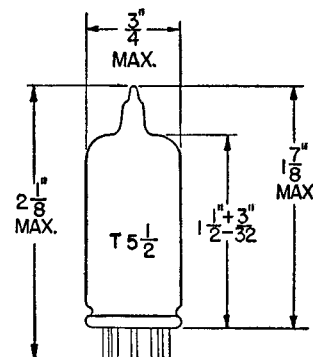


EIA 7CC

#### TERMINAL CONNECTIONS

- Pin 1—Grid Number 1
- Pin 2—Grid Number 3 (Suppressor)
- Pin 3—Heater
- Pin 4—Heater
- Pin 5—Plate
- Pin 6—Grid Number 2 (Screen)
- Pin 7—Cathode

#### PHYSICAL DIMENSIONS



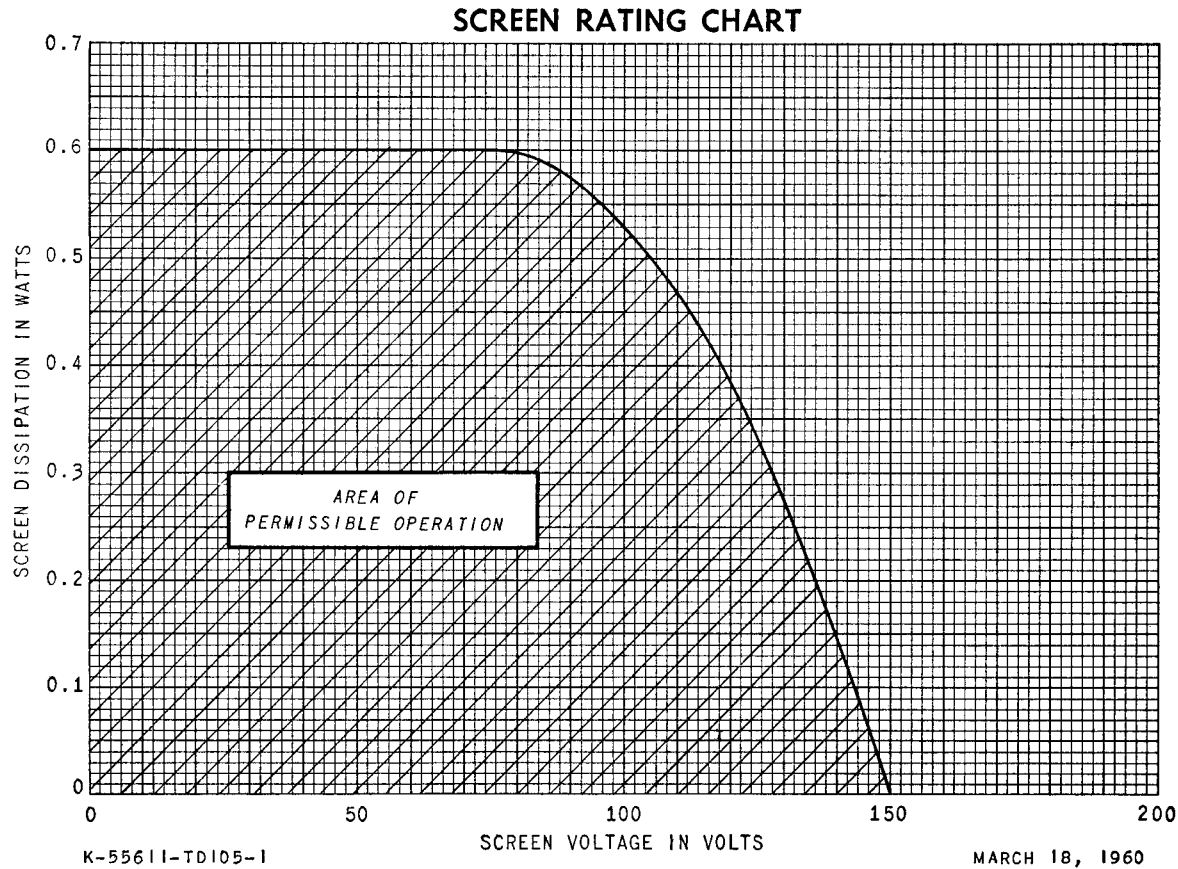
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CHARACTERISTICS AND TYPICAL OPERATION

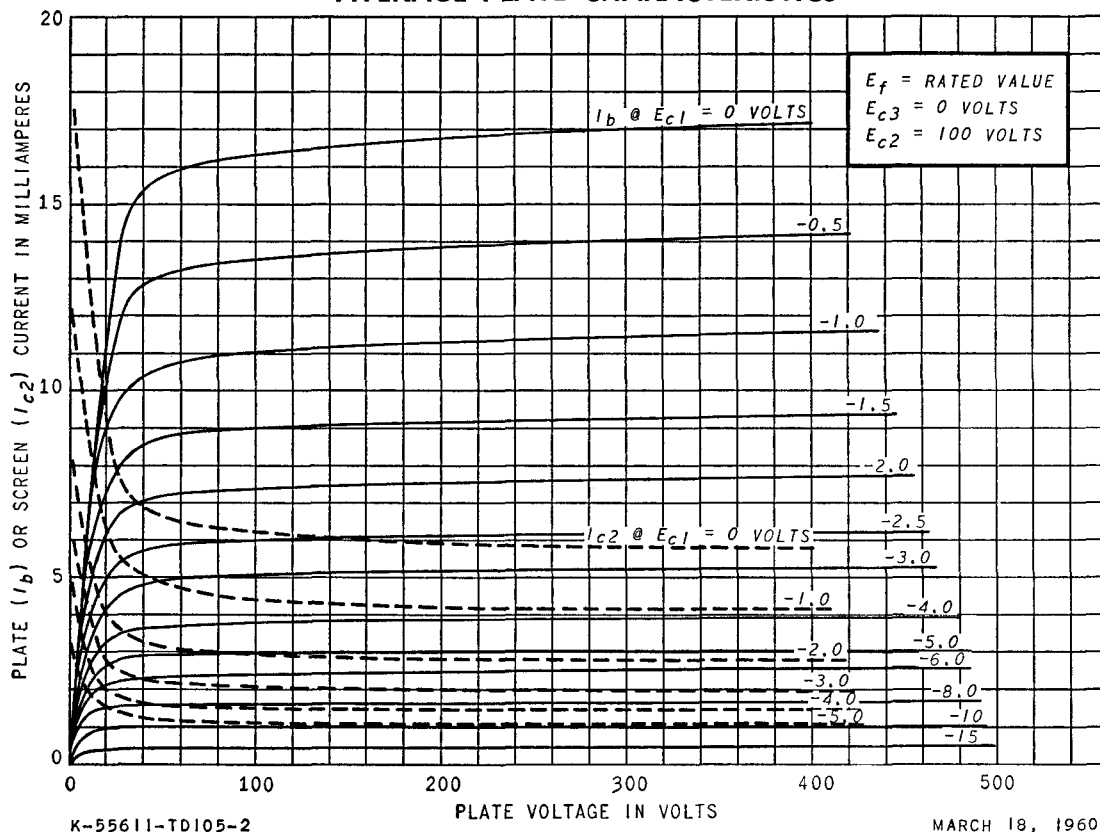
AVERAGE CHARACTERISTICS

|                                            |      |              |
|--------------------------------------------|------|--------------|
| Plate Voltage . . . . .                    | 100  | Volts        |
| Suppressor, Connected to Cathode at socket |      |              |
| Screen Voltage . . . . .                   | 100  | Volts        |
| Cathode-Bias Resistor . . . . .            | 68   | Ohms         |
| Plate Resistance, approximate . . . . .    | 0.25 | Megohms      |
| Transconductance . . . . .                 | 4100 | Micromhos    |
| Plate Current . . . . .                    | 9.0  | Milliamperes |
| Screen Current . . . . .                   | 3.9  | Milliamperes |
| Grid-Number 1 Voltage, approximate         |      |              |
| Gm = 25 Micromhos . . . . .                | -20  | Volts        |

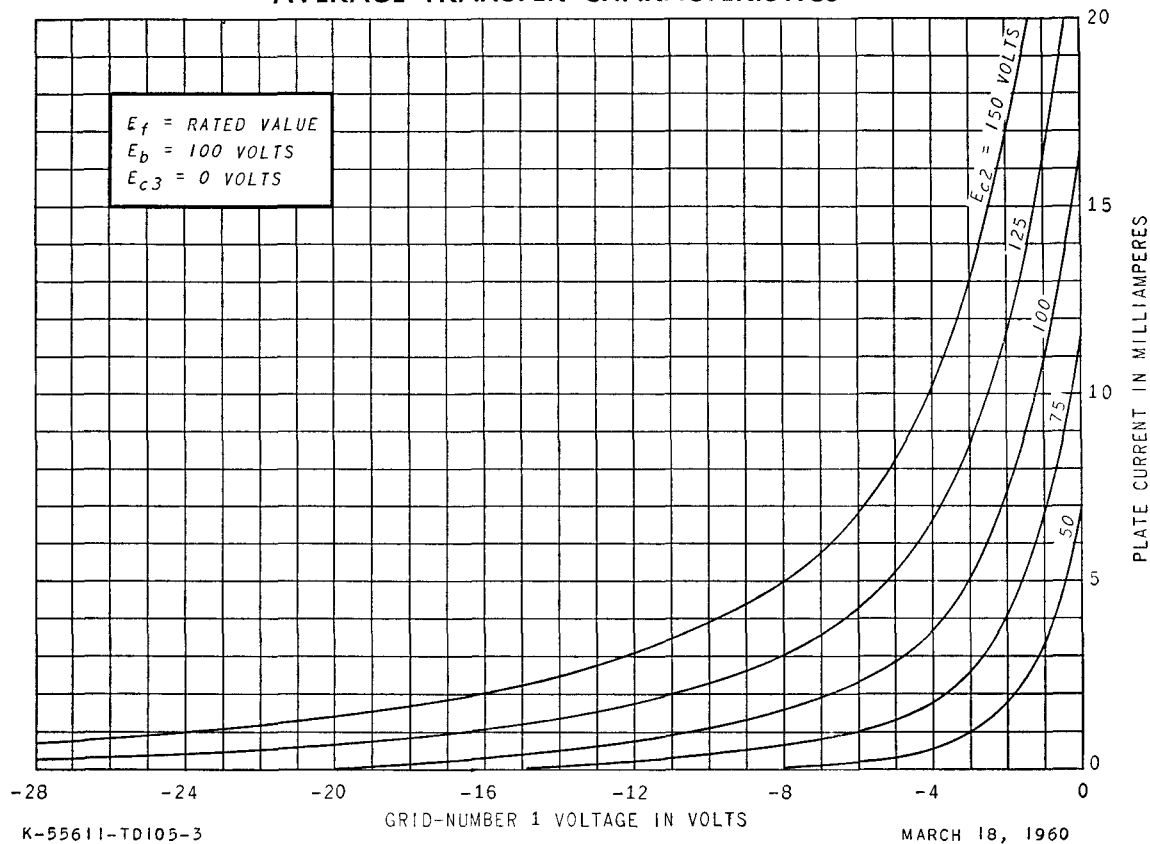
\* With external shield (EIA 316) connected to cathode.



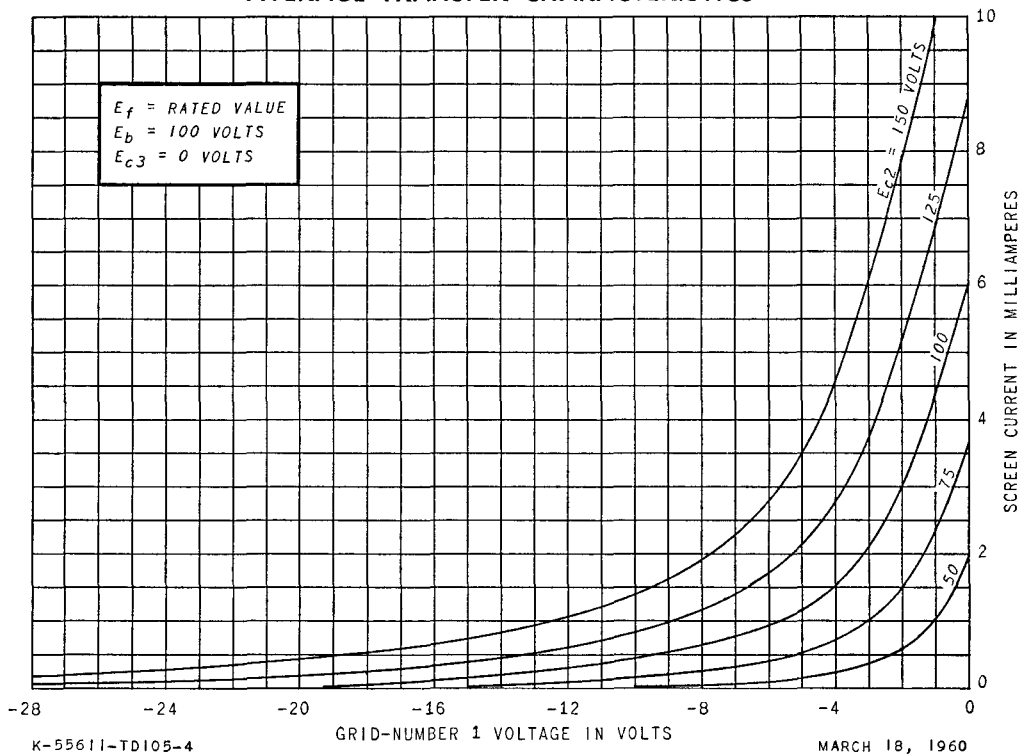
# AVERAGE PLATE CHARACTERISTICS



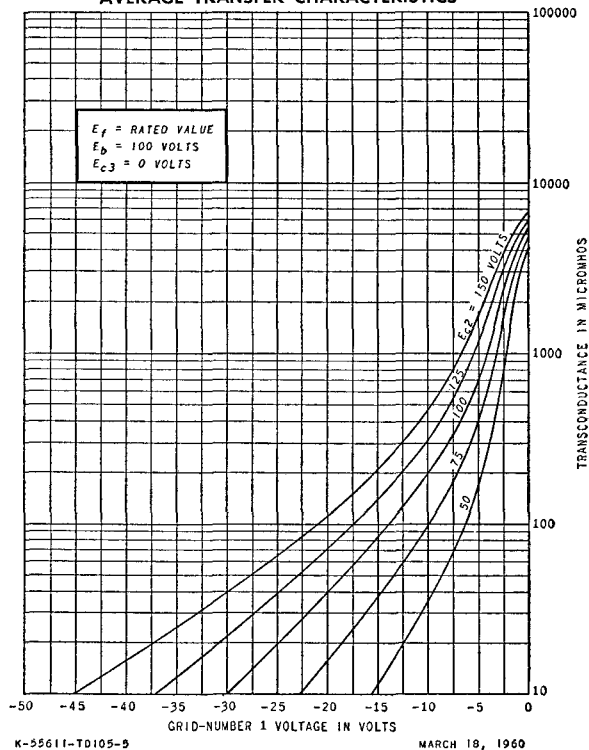
# AVERAGE TRANSFER CHARACTERISTICS



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# AVERAGE TRANSFER CHARACTERISTICS



ELECTRONIC COMPONENTS DIVISION



Schenectady 5, N. Y.