

## BEAM PENTODE

FOR TV VERTICAL-DEFLECTION-AMPLIFIER APPLICATIONS

### DESCRIPTION AND RATING

The 6EZ5 is a beam-power pentode designed for use as the vertical-deflection amplifier in television receivers that employ 110-degree deflection picture tubes. Features of the tube include high perveance and high plate dissipation.

#### ELECTRICAL

Cathode—Coated Unipotential

Heater Voltage, AC or DC..... $6.3 \pm 10\%$  Volts

Heater Current.....0.8 Amperes

Direct Interelectrode Capacitances, approximate\*

Grid-Number 1 to Plate.....0.6  $\mu\text{f}$

Input.....9.0  $\mu\text{f}$

Output.....7.0  $\mu\text{f}$

#### MECHANICAL

Mounting Position—Any

Envelope—T-9, Glass

Base—B6-81, Intermediate-Shell Octal 6-Pin

#### GENERAL

#### MAXIMUM RATINGS

##### VERTICAL-DEFLECTION-AMPLIFIER SERVICE†

##### DESIGN-MAXIMUM VALUES

DC Plate Voltage.....350 Volts

Peak Pulse Plate Voltage.....2500 Volts

Screen Voltage.....300 Volts

Plate Dissipation†.....12 Watts

Screen Dissipation†.....2.75 Watts

DC Cathode Current......75 Milliamperes

Peak Cathode Current.....260 Milliamperes

Heater-Cathode Voltage

Heater Positive with Respect to Cathode

DC Component.....100 Volts

Total DC and Peak.....200 Volts

Heater Negative with Respect to Cathode

Total DC and Peak.....200 Volts

Grid-Number 1 Circuit Resistance

With Cathode Bias.....2.2 Megohms

With Fixed Bias.....1.0 Megohms

Bulb Temperature at Hottest Point.....200 C

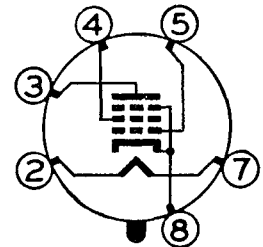
Design-Maximum ratings are limiting values of operating and environmental conditions applicable to a bogey tube of a specified type as defined by its published data, and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, taking responsibility for the effects of changes in operating conditions due to variations in tube characteristics.

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, 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



KEY

EIA 7AC

#### TERMINAL CONNECTIONS

Pin 2—Heater

Pin 3—Plate

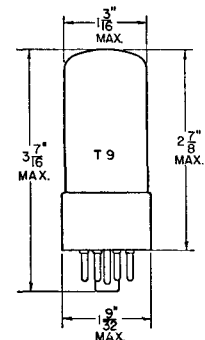
Pin 4—Grid Number 2  
(Screen)

Pin 5—Grid Number 1

Pin 7—Heater

Pin 8—Cathode and Beam  
Plates

#### PHYSICAL DIMENSIONS



EIA 9-15

## CHARACTERISTICS AND TYPICAL OPERATION

### AVERAGE CHARACTERISTICS

|                                                                     |     |                  |
|---------------------------------------------------------------------|-----|------------------|
| Plate Voltage.....                                                  | 60  | 250 Volts        |
| Screen Voltage.....                                                 | 250 | 250 Volts        |
| Grid-Number 1 Voltage.....                                          | 0§  | -20 Volts        |
| Plate Resistance, approximate.....                                  | ... | 50000 Ohms       |
| Transconductance.....                                               | ... | 4100 Micromhos   |
| Plate Current.....                                                  | 180 | 43 Milliamperes  |
| Screen Current.....                                                 | 26  | 3.5 Milliamperes |
| Grid-Number 1 Voltage, approximate<br>$I_b = 100$ Microamperes..... | ... | -50 Volts        |

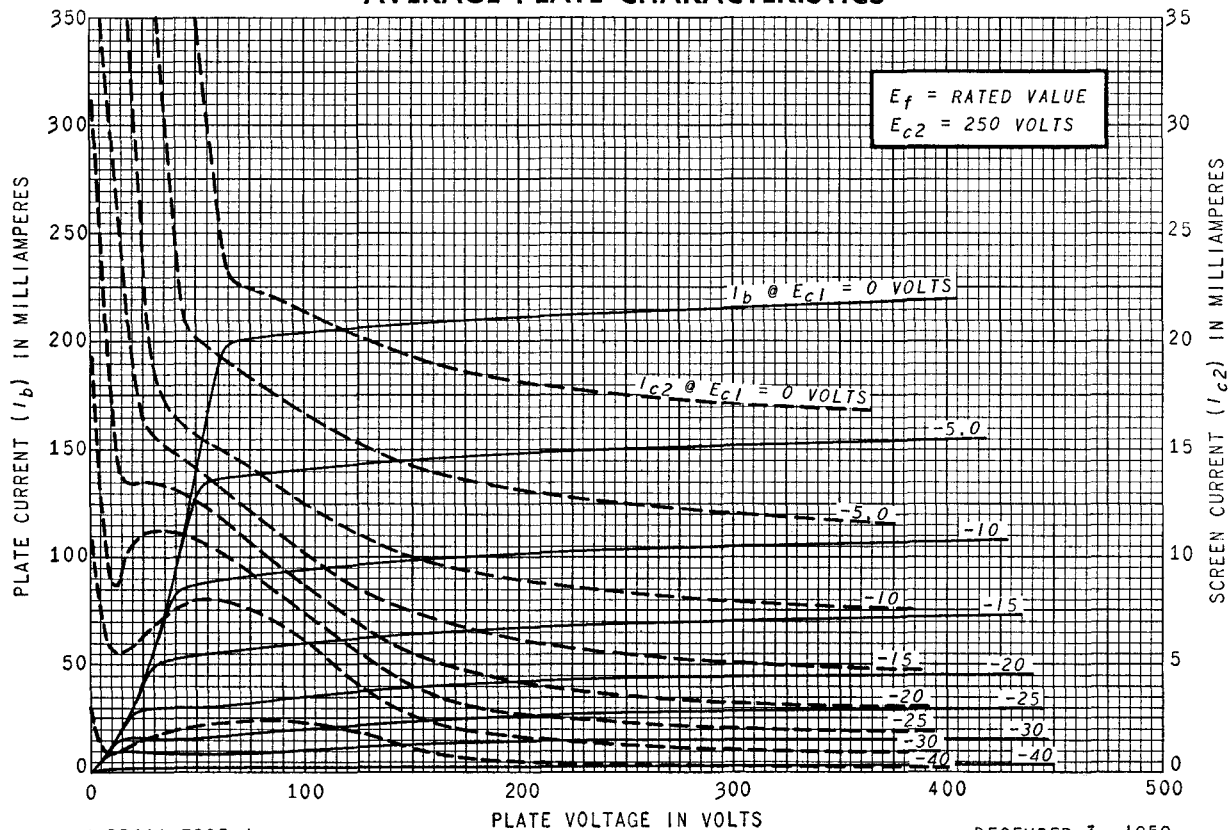
\* Without external shield.

† For operation in a 525-line, 30-frame television system as described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission. The duty cycle of the voltage pulse must not exceed 15 percent of one scanning cycle.

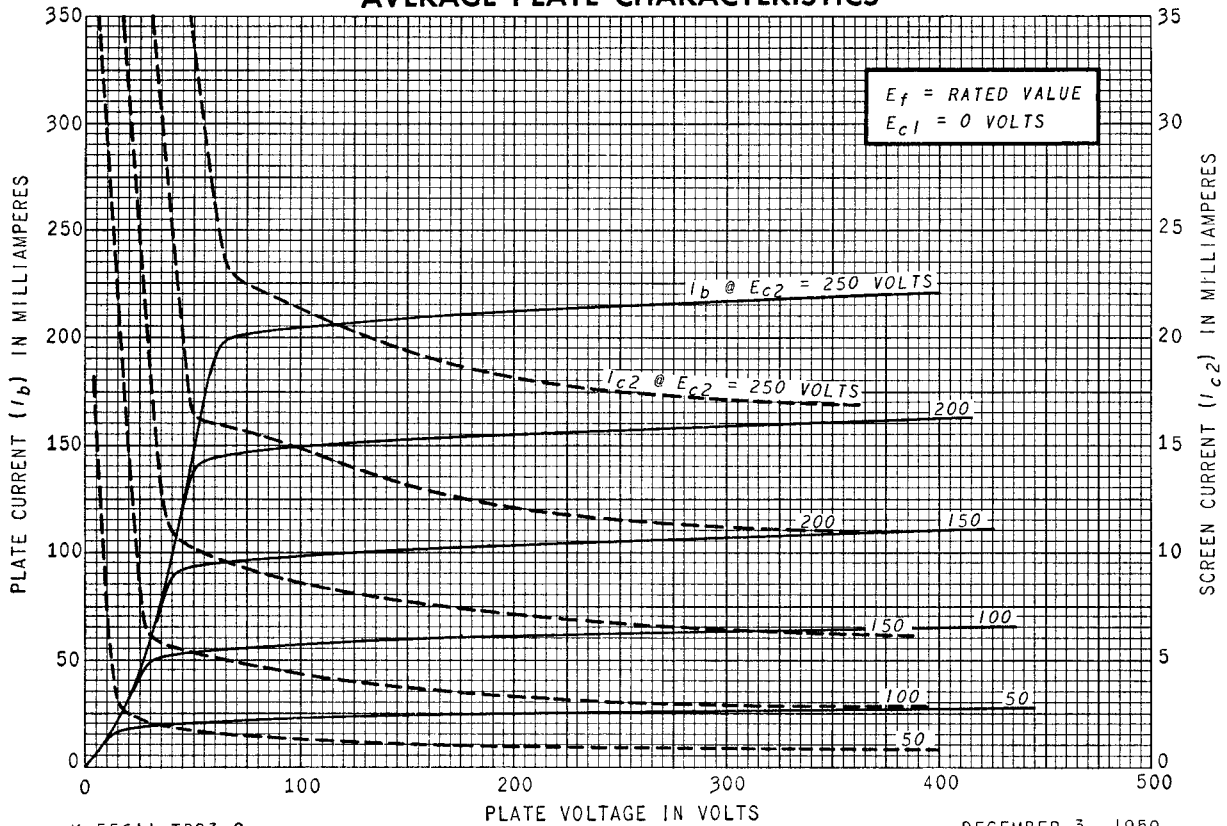
‡ In stages operating with grid leak bias, an adequate cathode-bias resistor or other suitable means is required to protect the tube in the absence of excitation.

§ Applied for short interval (two seconds maximum) so as not to damage tube.

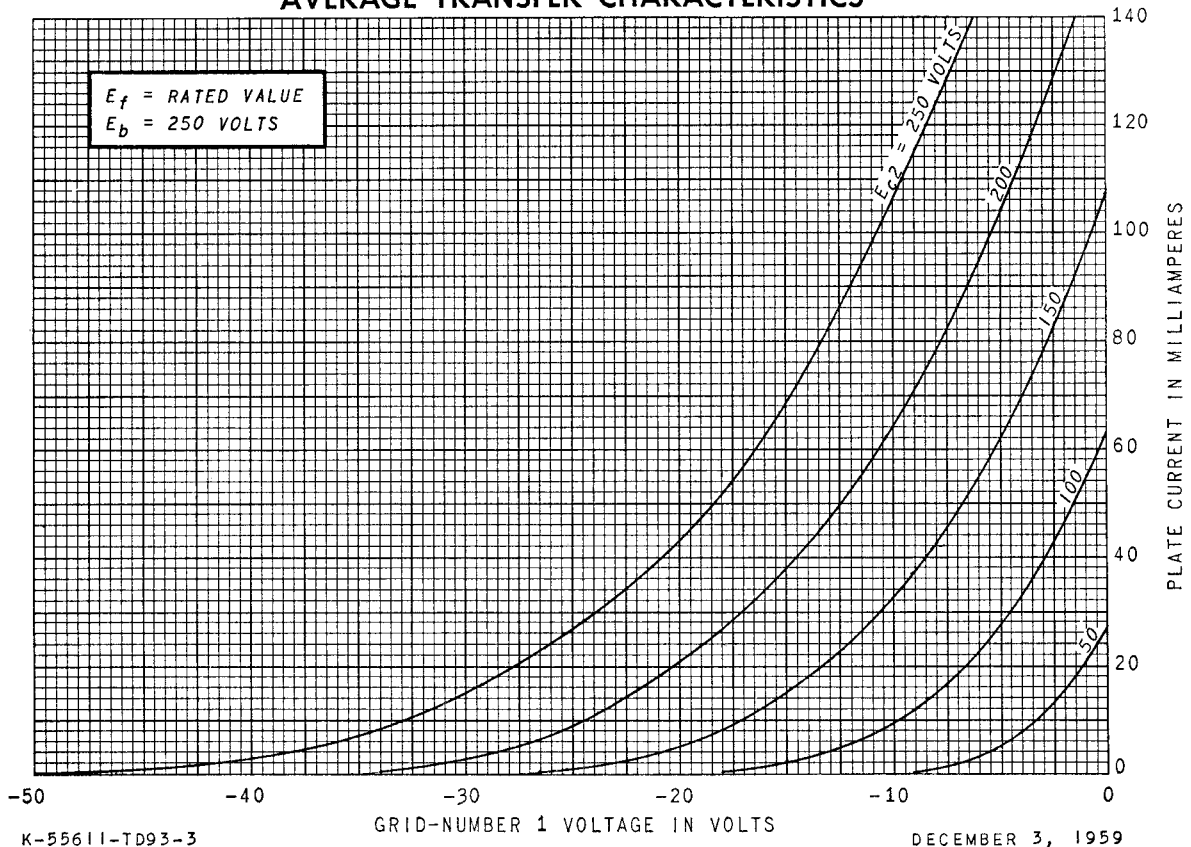
### AVERAGE PLATE CHARACTERISTICS



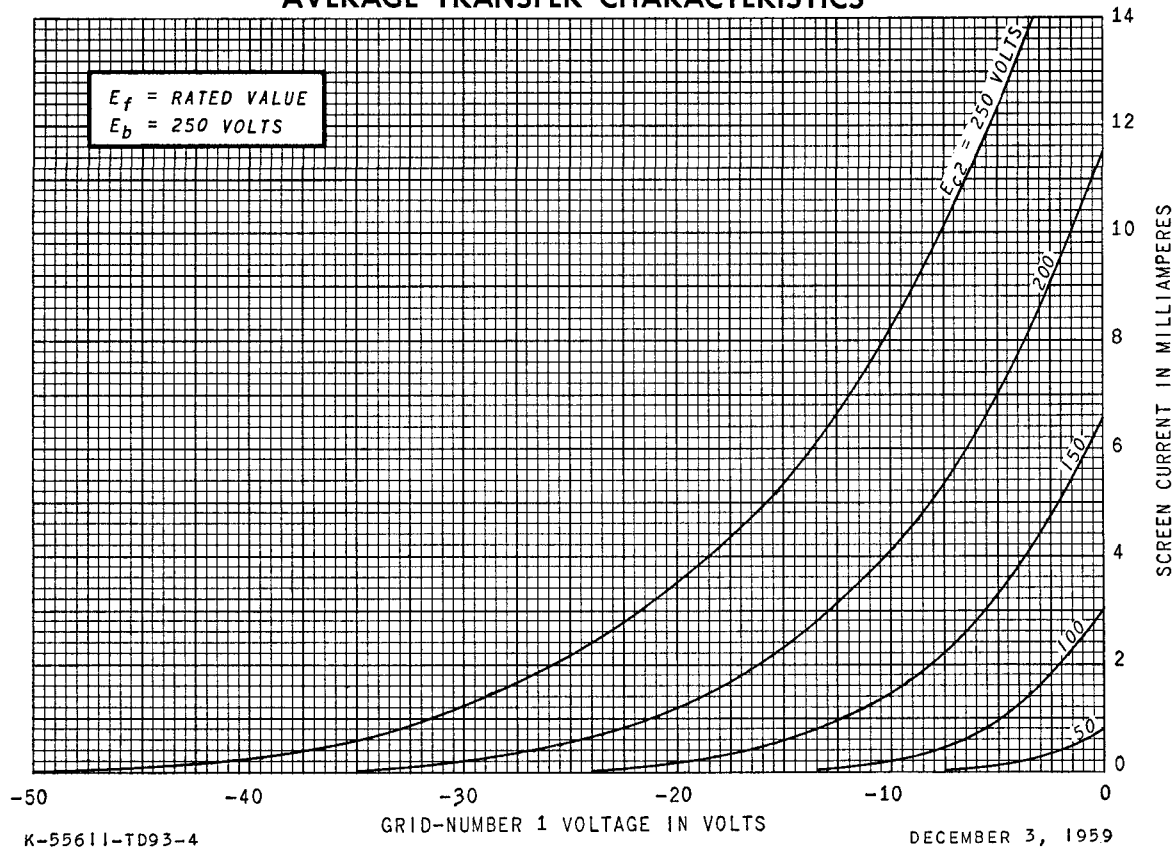
## AVERAGE PLATE CHARACTERISTICS



## AVERAGE TRANSFER CHARACTERISTICS



### AVERAGE TRANSFER CHARACTERISTICS



ELECTRONIC COMPONENTS DIVISION

**GENERAL**  **ELECTRIC**

Schenectady 5, N. Y.