

### DESCRIPTION AND RATING

The 6EW6 is a miniature, sharp-cutoff pentode designed for intermediate-frequency amplifier service in television receivers. Features of the tube include high transconductance and separate base-pin terminals for the cathode and suppressor.

#### GENERAL

##### ELECTRICAL

|                                    |                     |                       |     |
|------------------------------------|---------------------|-----------------------|-----|
| Cathode—Coated Unipotential        |                     |                       |     |
| Heater Voltage, AC or DC           | 6.3 ± 10%           | Volts                 |     |
| Heater Current                     | 0.4                 | Amperes               |     |
|                                    | <b>With Shield*</b> | <b>Without Shield</b> |     |
| Direct Interelectrode Capacitances |                     |                       |     |
| Grid-Number 1 to Plate, maximum    | 0.03                | 0.04                  | μμf |
| Input                              | 10.0                | 10.0                  | μμf |
| Output                             | 3.4                 | 2.4                   | μμf |

##### MECHANICAL

Mounting Position—Any  
Envelope—T-5½, Glass  
Base—E7-1, Miniature-Button 7-Pin

#### MAXIMUM RATINGS

##### DESIGN-MAXIMUM VALUES

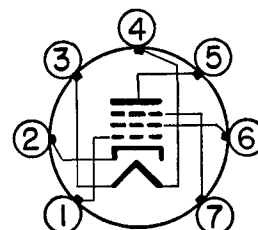
|                                         |      |       |
|-----------------------------------------|------|-------|
| Plate Voltage                           | 330  | Volts |
| Screen-Supply Voltage                   | 330  | Volts |
| Screen Voltage—See Screen Rating Chart  |      |       |
| Positive DC Grid-Number 1 Voltage       | 0    | Volts |
| Plate Dissipation                       | 3.1  | Watts |
| Screen Dissipation                      | 0.65 | Watts |
| 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 |

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.

#### BASING DIAGRAM

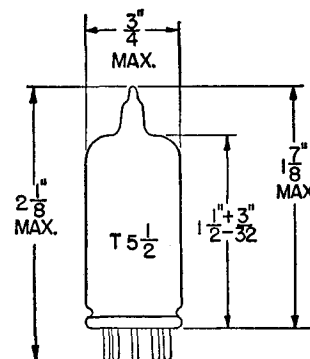


EIA 7CM

#### TERMINAL CONNECTIONS

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

#### PHYSICAL DIMENSIONS



EIA 5-2

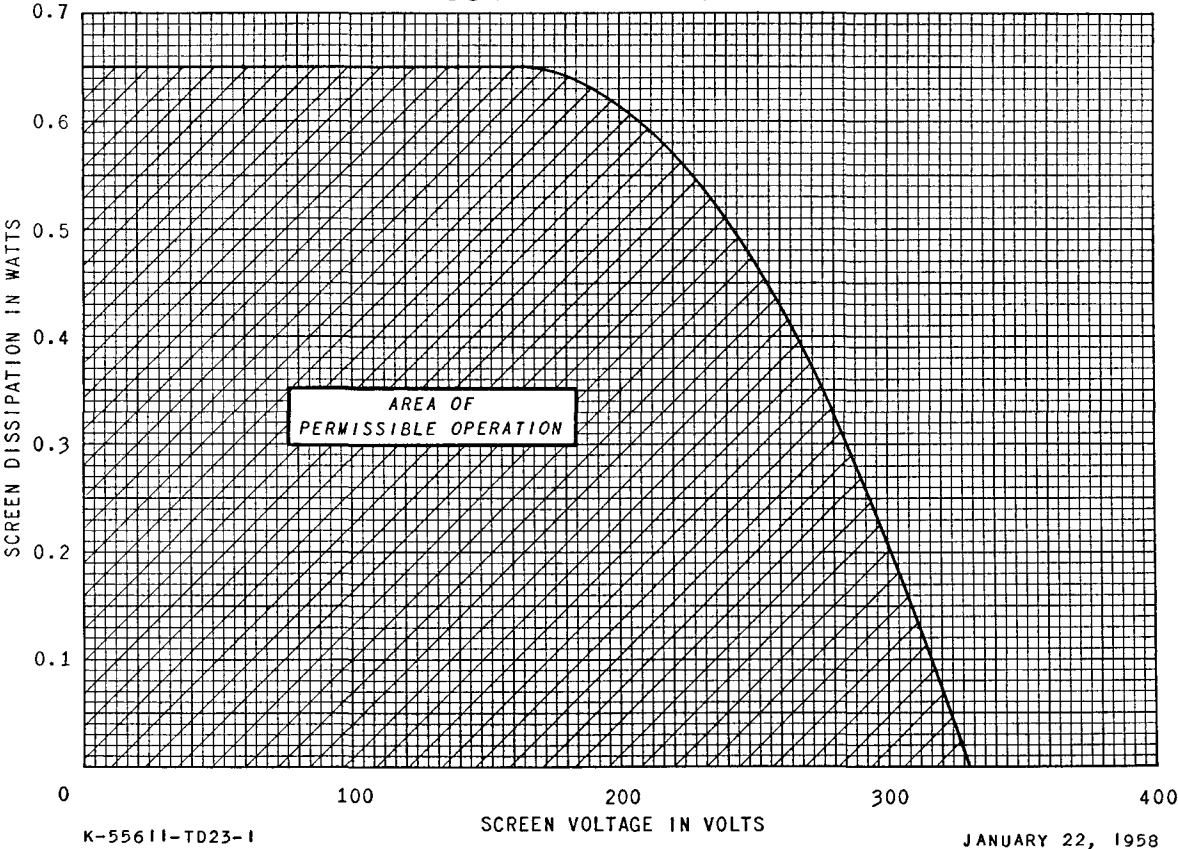
**CHARACTERISTICS AND TYPICAL OPERATION**

**CLASS A<sub>1</sub> AMPLIFIER**

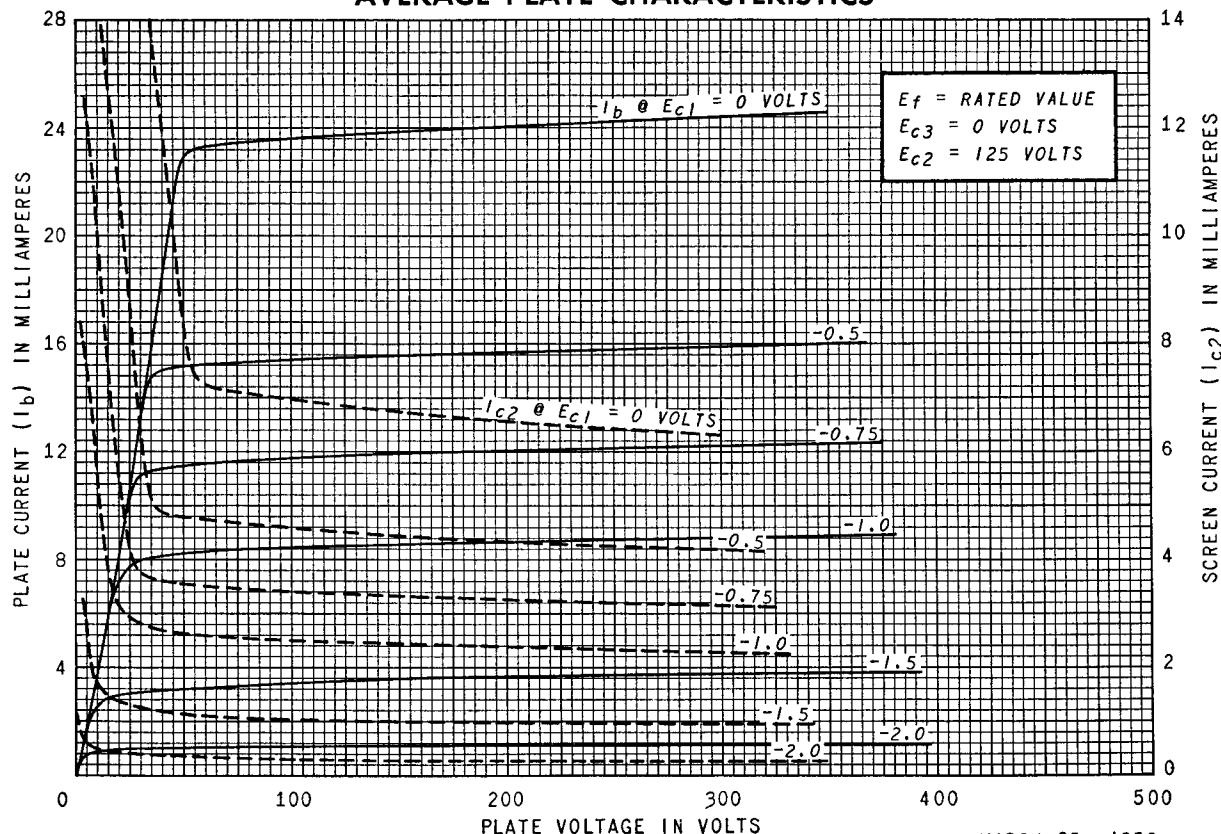
|                                            |       |              |
|--------------------------------------------|-------|--------------|
| Plate Voltage . . . . .                    | 125   | Volts        |
| Suppressor, Connected to Cathode at Socket |       |              |
| Screen Voltage . . . . .                   | 125   | Volts        |
| Cathode-Bias Resistor . . . . .            | 56    | Ohms         |
| Plate Resistance, approximate . . . . .    | 0.2   | Megohms      |
| Transconductance . . . . .                 | 14000 | Micromhos    |
| Plate Current . . . . .                    | 11    | Milliamperes |
| Screen Current . . . . .                   | 3.2   | Milliamperes |
| Grid-Number 1 Voltage, approximate         |       |              |
| I <sub>b</sub> = 20 Microamperes . . . . . | −3.5  | Volts        |

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

**SCREEN RATING CHART**

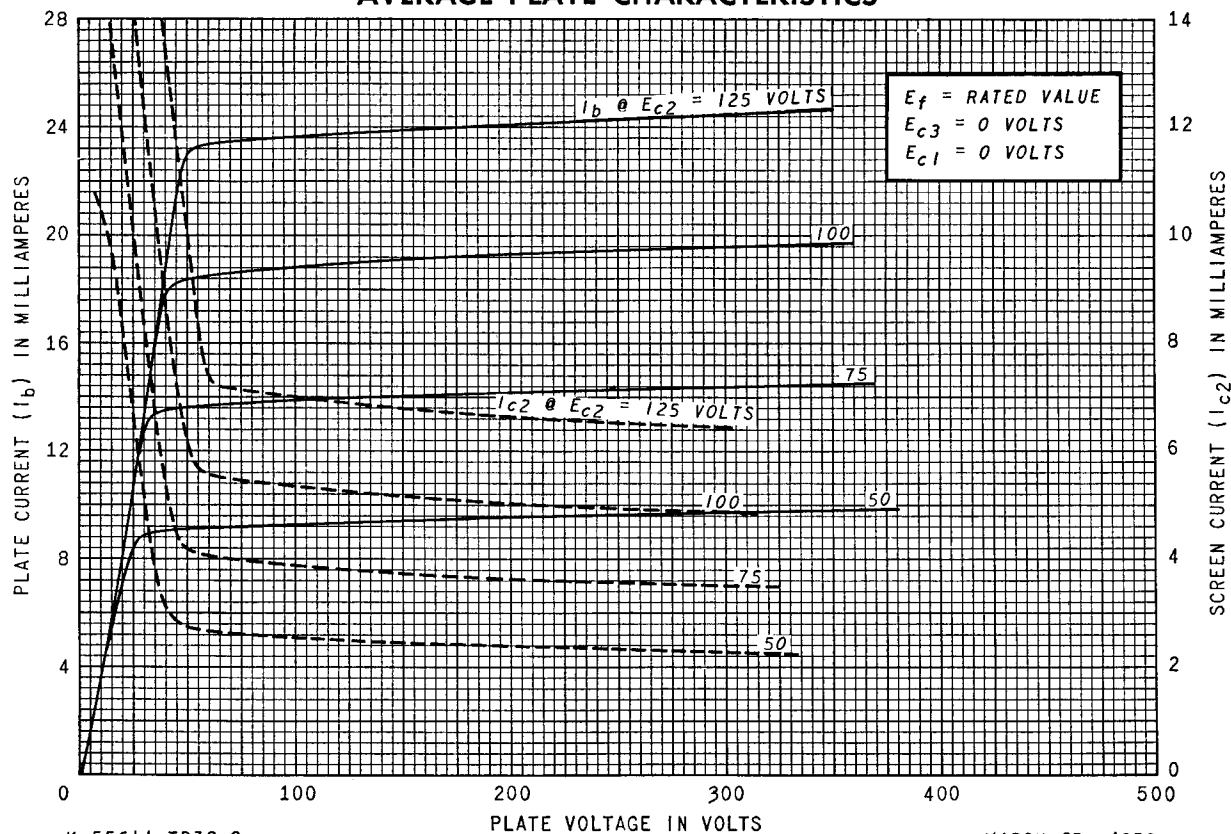


# AVERAGE PLATE CHARACTERISTICS



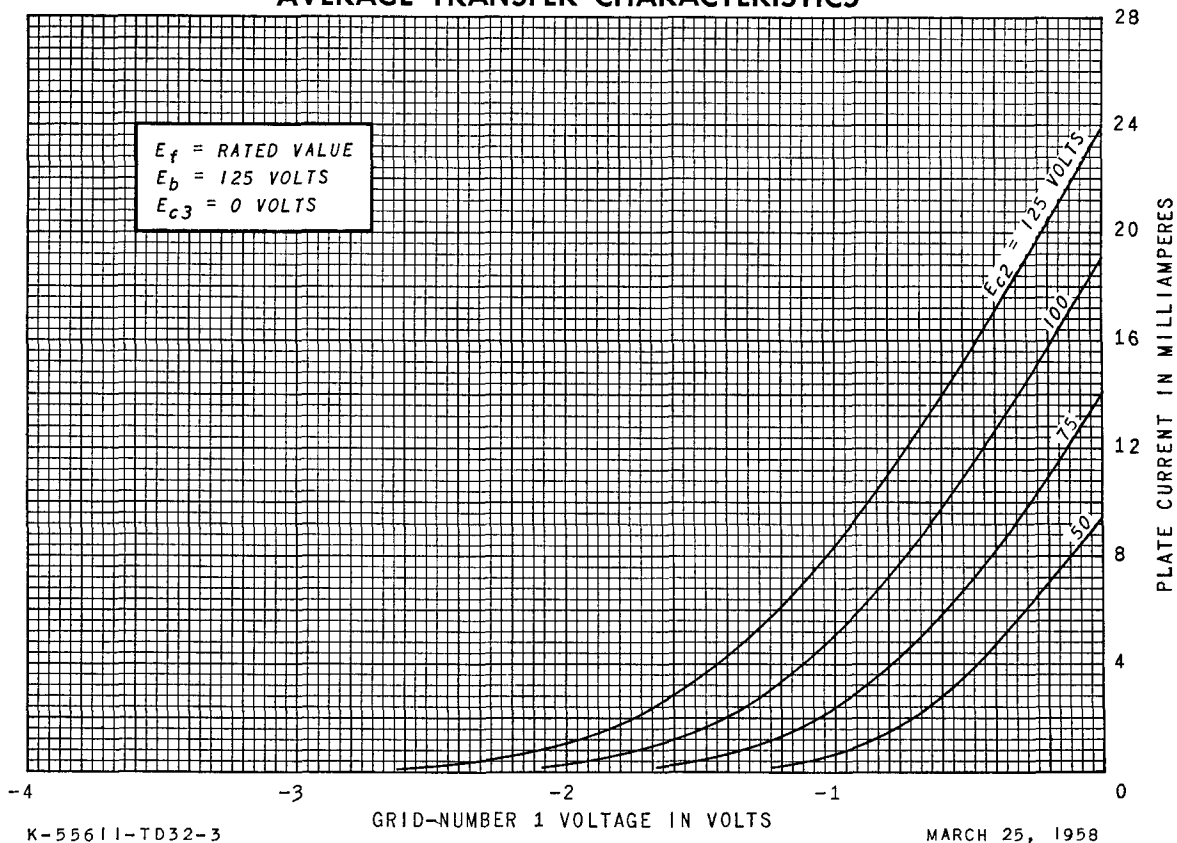
MARCH 25, 1958

# AVERAGE PLATE CHARACTERISTICS



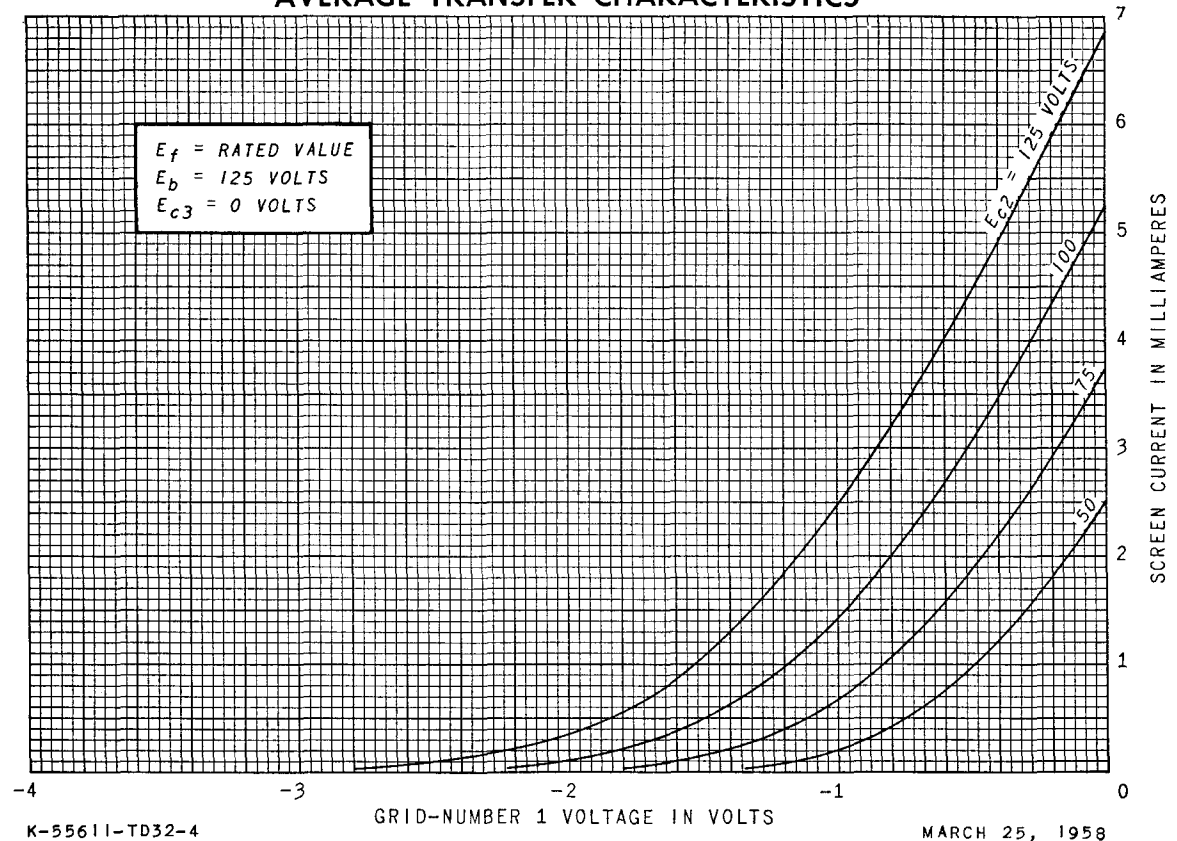
MARCH 25, 1958

## AVERAGE TRANSFER CHARACTERISTICS



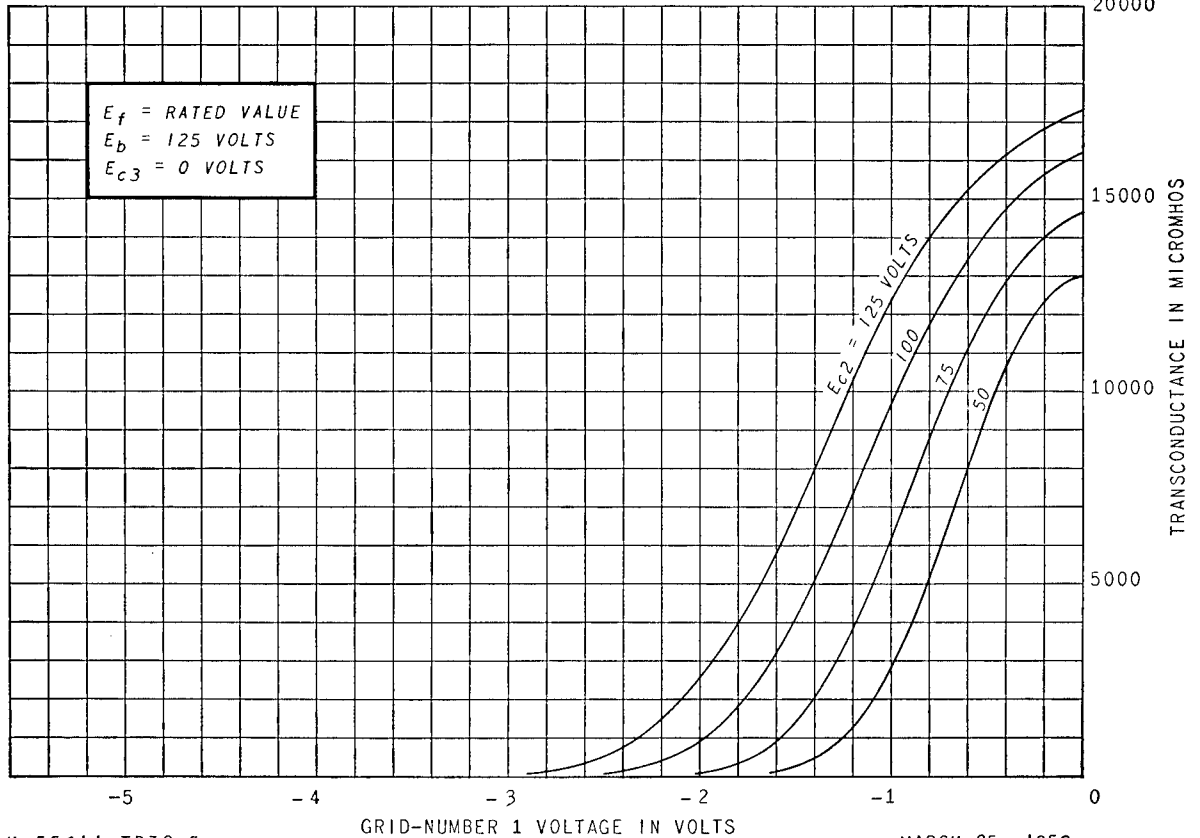
MARCH 25, 1958

## AVERAGE TRANSFER CHARACTERISTICS



MARCH 25, 1958

# AVERAGE TRANSFER CHARACTERISTICS



K-55611-TD32-5