

FOR AF POWER-AMPLIFIER APPLICATIONS

DESCRIPTION AND RATING

The 50EH5 is a miniature power pentode primarily designed for use in the audio-frequency power-output stage of radio receivers and phonographs. The tube features high power sensitivity at low plate and screen voltages.

GENERAL

ELECTRICAL

Cathode—Coated Unipotential		
Heater Voltage, AC or DC	50	Volts
Heater Current	0.15	Amperes
Direct Interelectrode Capacitances, approximate*		
Grid-Number 1 to Plate	0.65	$\mu\mu\text{f}$
Input	17	$\mu\mu\text{f}$
Output	9.0	$\mu\mu\text{f}$

MECHANICAL

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

MAXIMUM RATINGS

DESIGN-CENTER VALUES

Plate Voltage	135	Volts
Screen Voltage	117	Volts
Positive DC Grid-Number 1 Voltage	0	Volts
Plate Dissipation	5.0	Watts
Screen Dissipation	1.75	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
Grid-Number 1 Circuit Resistance		
With Fixed Bias	0.1	Megohms
With Cathode Bias	0.5	Megohms
Bulb Temperature at Hottest Point	220	C

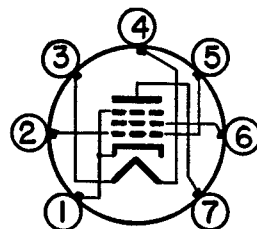
Design-Center ratings are limiting values of operating and environmental conditions applicable to a bogey tube of a specified type as defined by its published data, and should not be exceeded under normal conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube in average applications, taking responsibility for normal changes in operating conditions due to rated supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in tube characteristics.

The equipment manufacturer should design so that initially no design-center value for the intended service is exceeded with a bogey tube in equipment operating at the stated normal supply-voltage.

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

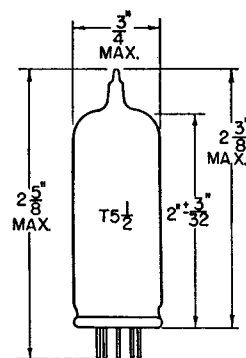


EIA 7CV

TERMINAL CONNECTIONS

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

PHYSICAL DIMENSIONS



EIA 5-3

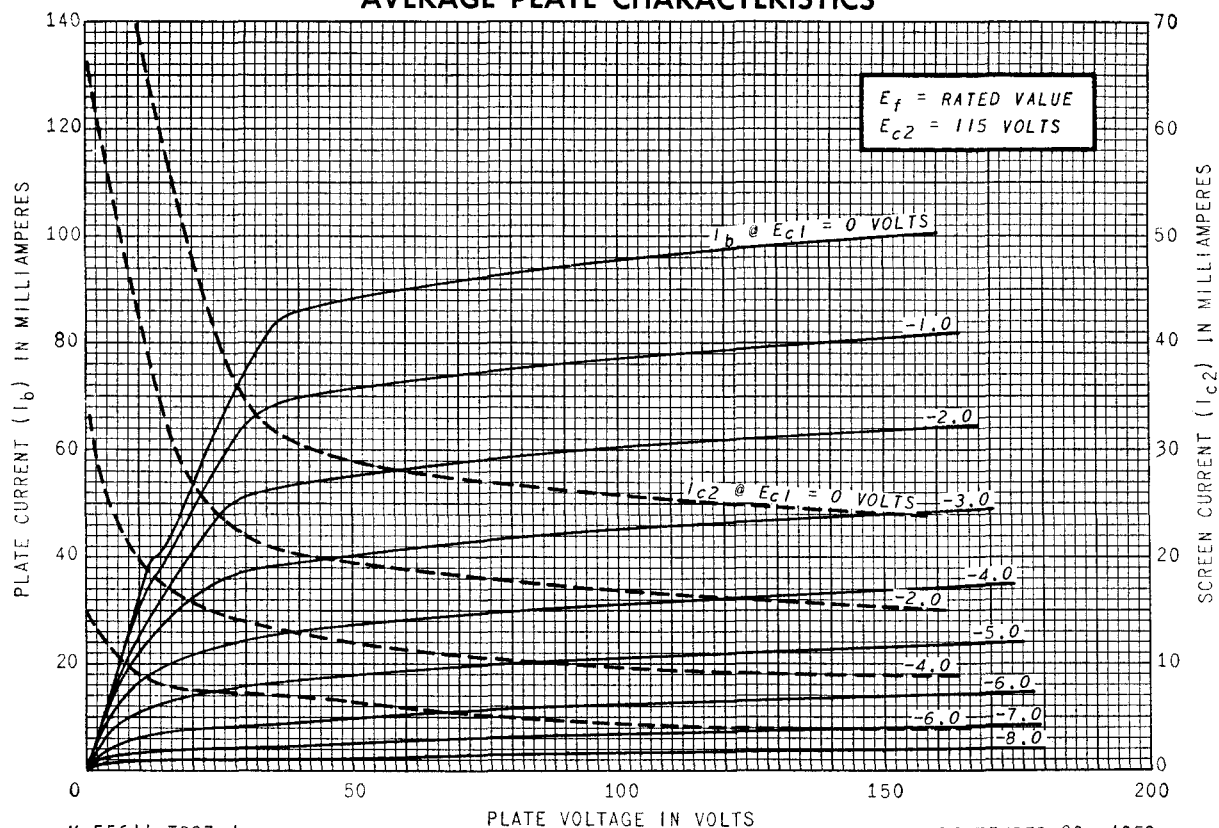
CHARACTERISTICS AND TYPICAL OPERATION

CLASS A₁ AMPLIFIER

Plate Voltage	110	Volts
Screen Voltage	115	Volts
Cathode-Bias Resistor	62	Ohms
Peak AF Grid-Number 1 Voltage	3.0	Volts
Plate Resistance, approximate	11000	Ohms
Transconductance	14600	Micromhos
Zero-Signal Plate Current	42	Milliamperes
Maximum-Signal Plate Current	42	Milliamperes
Zero-Signal Screen Current	11.5	Milliamperes
Maximum-Signal Screen Current	14.5	Milliamperes
Load Resistance	3000	Ohms
Total Harmonic Distortion, approximate	7	Percent
Maximum-Signal Power Output	1.4	Watts

* Without external shield.

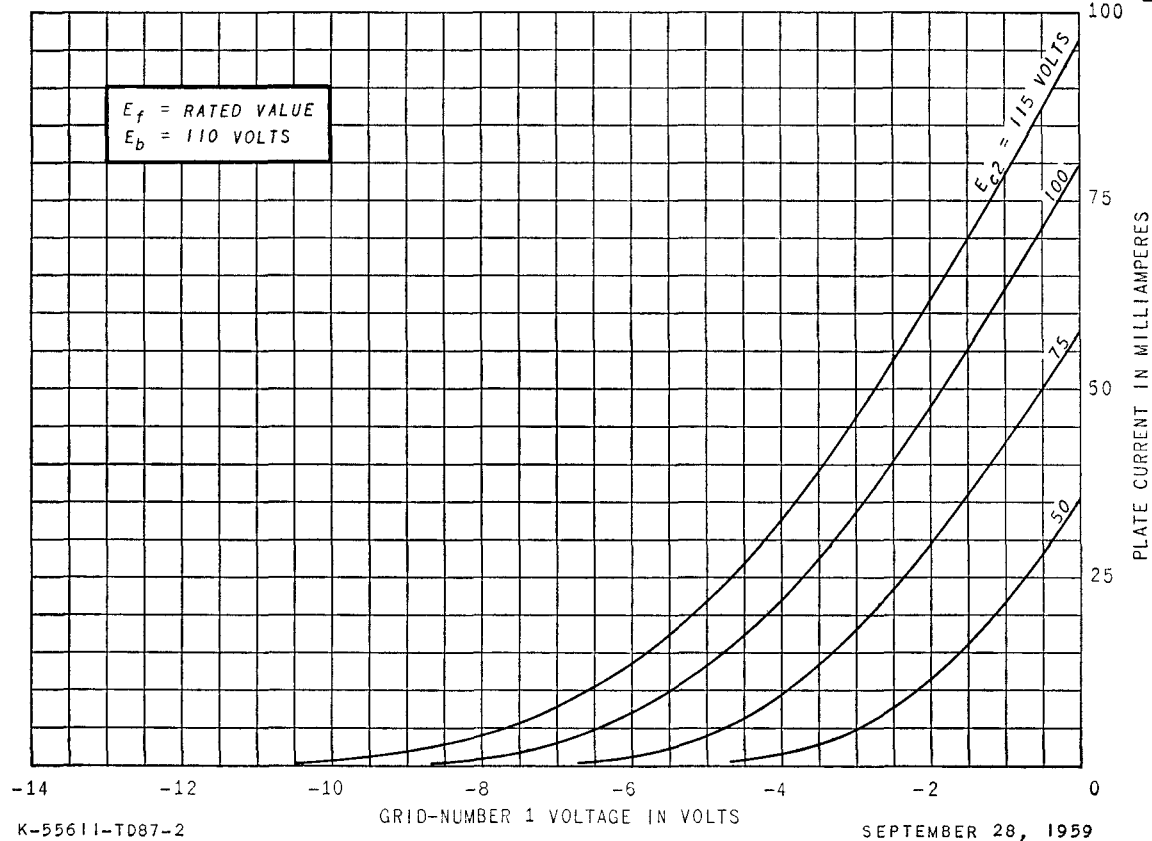
AVERAGE PLATE CHARACTERISTICS



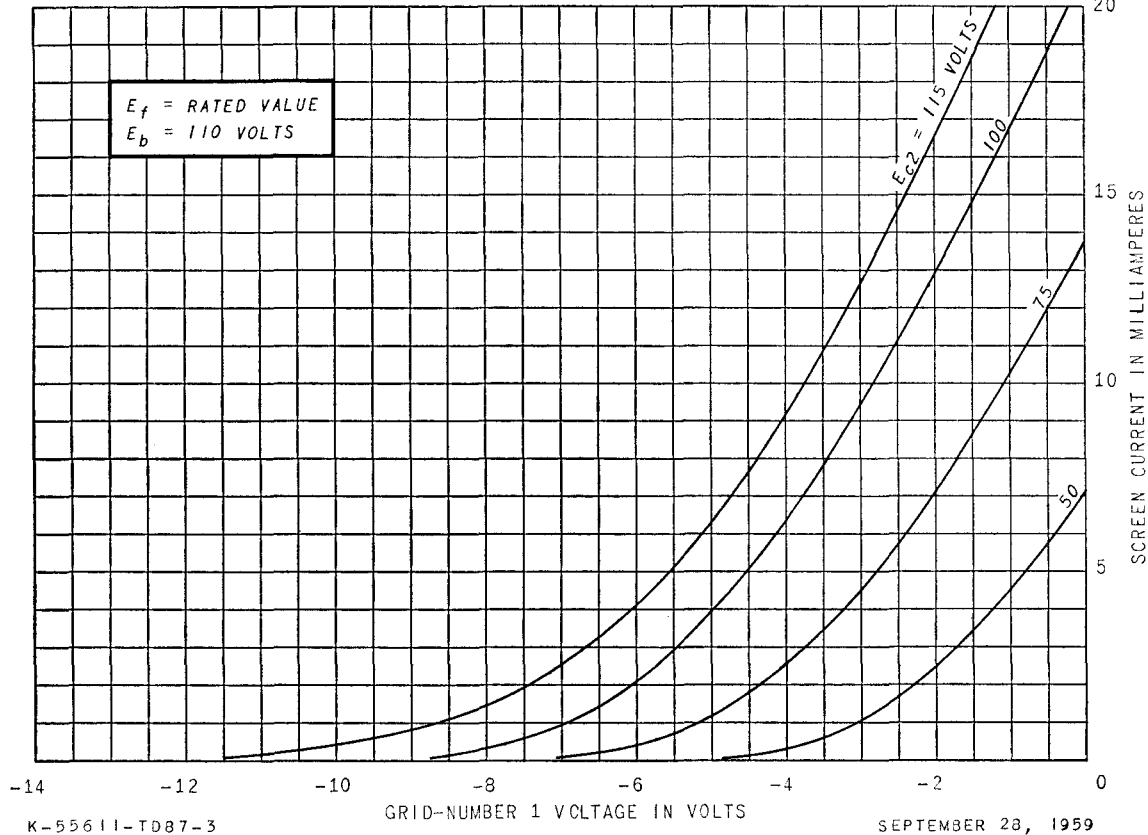
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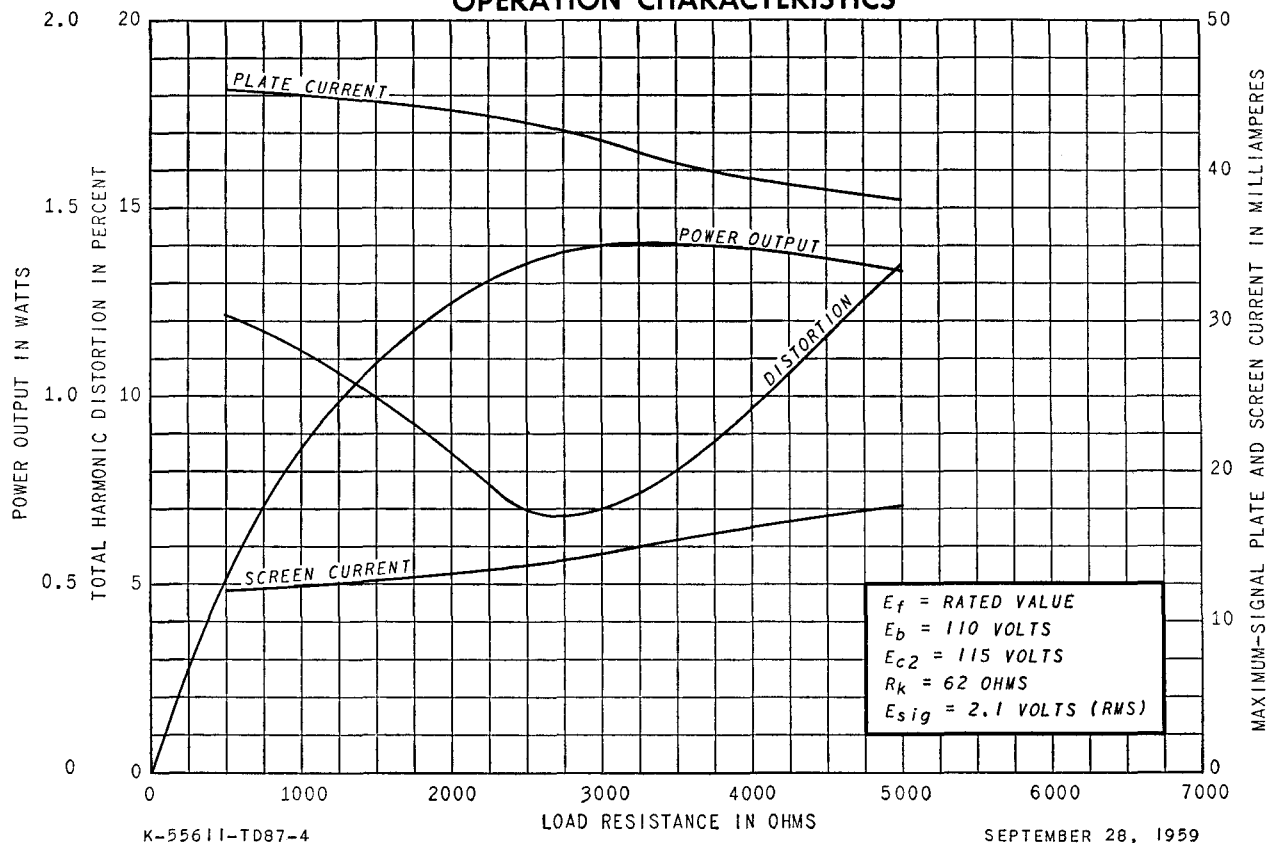
AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



OPERATION CHARACTERISTICS



ELECTRONIC COMPONENTS DIVISION
GENERAL ELECTRIC
 Schenectady 5, N. Y.