



POWER-AMPLIFIER PENTODE

DESCRIPTION AND RATING

FOR AF POWER AMPLIFIER APPLICATIONS

The 6CW5 is a power-amplifier pentode designed for use in the audio-frequency power-output stage of television and radio receivers and in high-fidelity amplifiers.

GENERAL

ELECTRICAL

Cathode—Coated Unipotential	
Heater Voltage, AC or DC	6.3 Volts
Heater Current	0.76 Amperes
Direct Interelectrode Capacitances*	
Grid Number 1 to Plate	0.6 pf
Grid Number 1 to All	12 pf
Plate to All	6.0 pf

MECHANICAL

Mounting Position—Any	
Envelope—T-6½, Glass	
Base—E9-1, Small Button 9-Pin	
Outline Drawing—EIA 6-4	
Maximum Diameter	⅞ Inches
Maximum Over-all Length	3⅛ Inches
Maximum Seated Height	2⅓ Inches

MAXIMUM RATINGS

DESIGN-CENTER VALUES

Plate Voltage	250 Volts
Screen Voltage	200 Volts
Plate Dissipation	12 Watts
Screen Dissipation	1.75 Watts
Peak Screen Dissipation	6.0 Watts
DC Cathode Current	100 Milliamperes

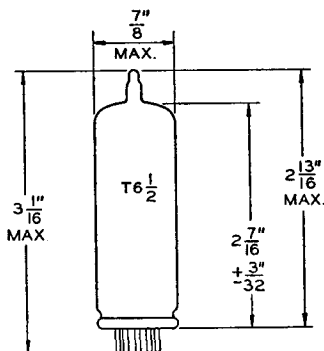
Heater-Cathode Voltage

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

DC Component	150 Volts
Total DC and Peak	300 Volts
Grid-Number 1 Circuit Resistance	
With Cathode Bias	1.0 Megohms

PHYSICAL DIMENSIONS

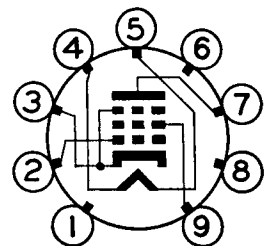


EIA 6-4

TERMINAL CONNECTIONS

- Pin 1—Internal Connection
- Pin 2—Grid Number 1
- Pin 3—Cathode and Grid Number 3 (Suppressor)
- Pin 4—Heater
- Pin 5—Heater
- Pin 6—Internal Connection
- Pin 7—Plate
- Pin 8—Internal Connection
- Pin 9—Grid Number 2 (Screen)

BASING DIAGRAMS



EIA 9CV

CHARACTERISTICS AND TYPICAL OPERATION

AVERAGE CHARACTERISTICS

Plate Voltage.....	170	Volts	Plate Resistance, approximate.....	23000	Ohms
Screen Voltage.....	170	Volts	Transconductance.....	10000	Micromhos
Grid-Number 1 Voltage.....	-12.5	Volts	Plate Current.....	70	Milliamperes
			Screen Current.....	5.0	Milliamperes

CLASS A₁ AMPLIFIER

Plate Voltage.....	170	Volts	Zero-Signal Screen Current.....	5.0	Milliamperes
Screen Voltage.....	170	Volts	Maximum-Signal Screen Current.....	22	Milliamperes
Grid-Number 1 Voltage.....	-12.5	Volts	Load Resistance.....	2400	Ohms
Peak AF Grid-Number 1 Voltage.....	9.9	Volts	Total Harmonic Distortion,		
Zero-Signal Plate Current.....	70	Milliamperes	approximate.....	10	Percent
Maximum-Signal Plate Current.....	70	Milliamperes	Maximum-Signal Power Output.....	5.6	Watts

PUSH-PULL CLASS AB₁ AMPLIFIER, VALUES FOR TWO TUBES

Plate Voltage.....	250	Volts	Zero-Signal Screen Current.....	4.0	Milliamperes
Screen Voltage.....	200	Volts	Maximum-Signal Screen Current.....	23	Milliamperes
Grid-Number 1 Voltage.....	-18.5	Volts	Effective Load Resistance,		
Peak AF Grid-to-Grid Voltage.....	34	Volts	Plate-to-Plate.....	3000	Ohms
Zero-Signal Plate Current.....	91	Milliamperes	Total Harmonic Distortion.....	1.0	Percent
Maximum-Signal Plate Current.....	180	Milliamperes	Maximum-Signal Power Output.....	25	Watts

*Without external shield.

Design-Center ratings are limiting values of operating and environmental conditions applicable to a bogey electron 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, making allowance for normal changes in operating conditions due to rated supply-voltage variation, equipment

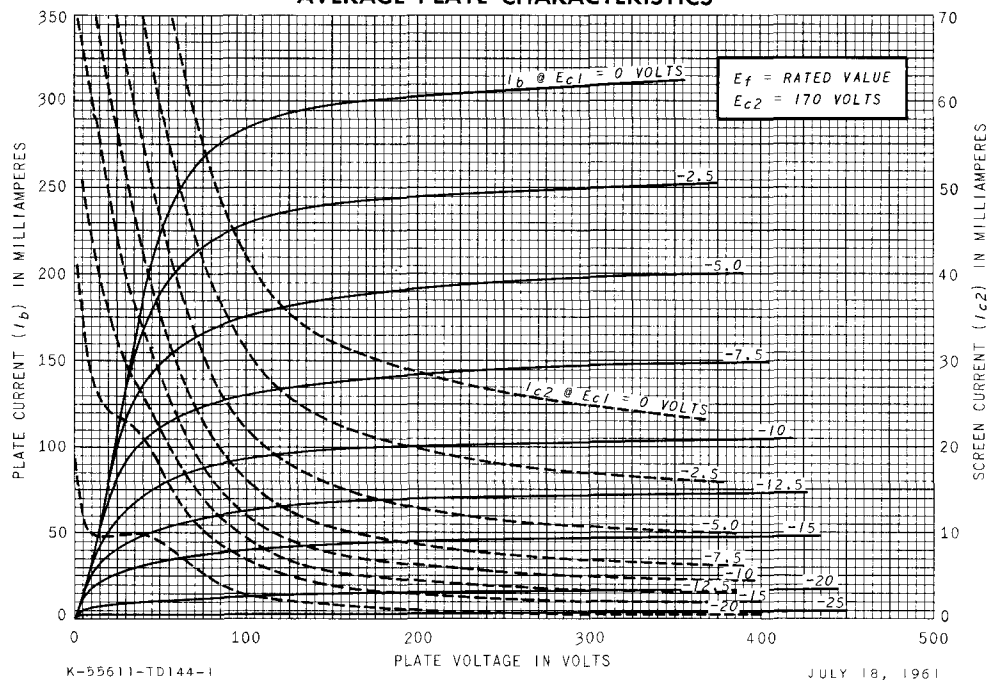
component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of the tube under consideration and of all other electron devices in the equipment.

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

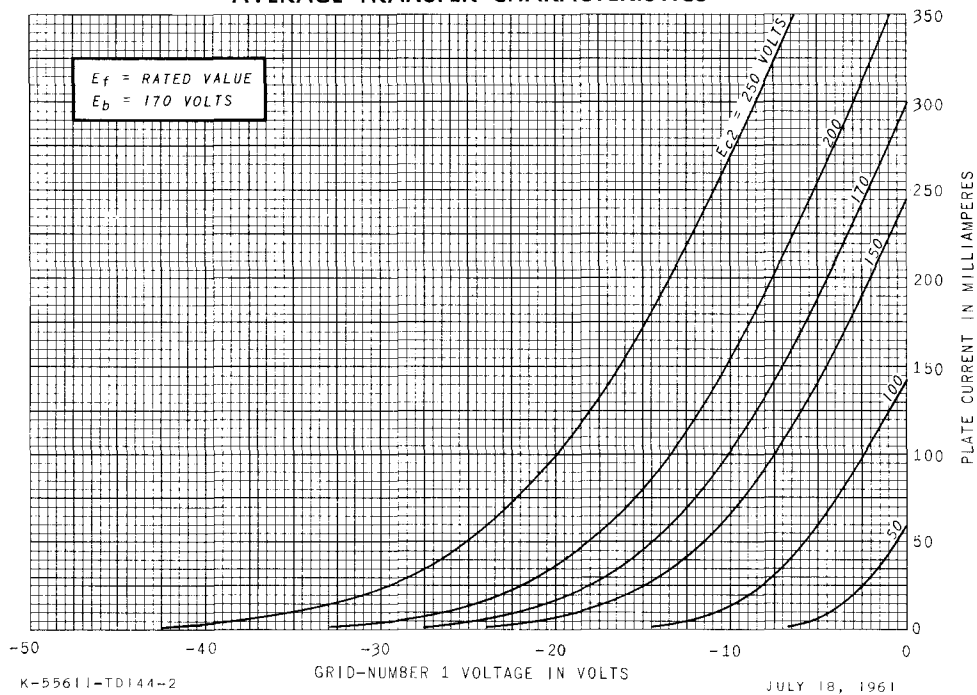
The tubes and arrangements disclosed herein may be covered by patents of General Electric Company or others. Neither the disclosure of any information herein nor the sale of tubes by General Electric Company conveys any license under patent claims covering combinations of tubes with other devices or

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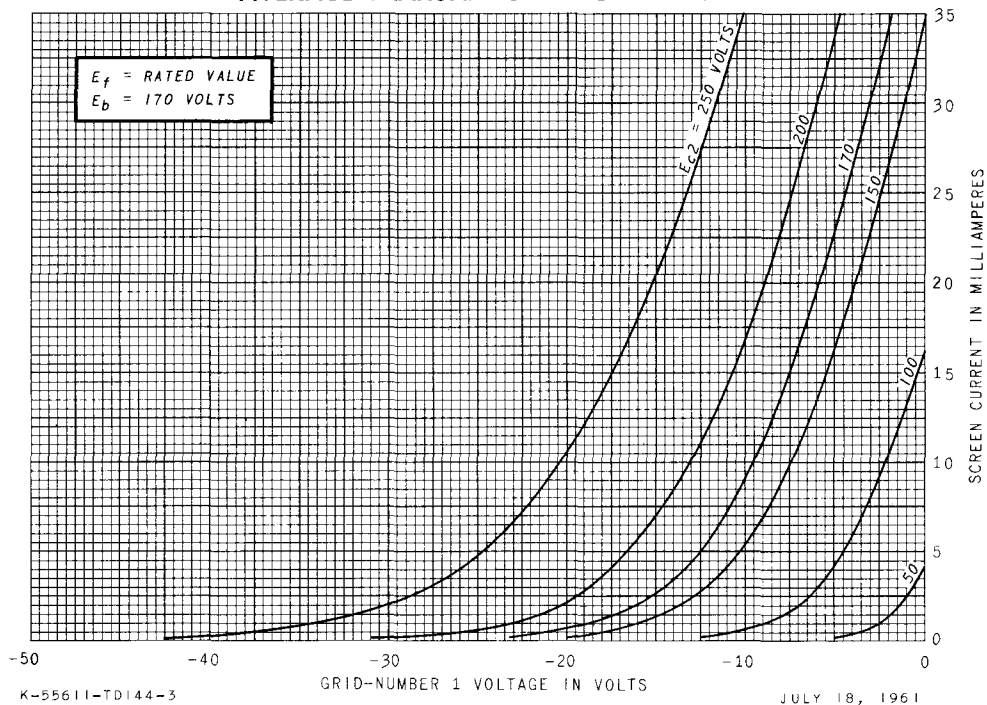
AVERAGE PLATE CHARACTERISTICS



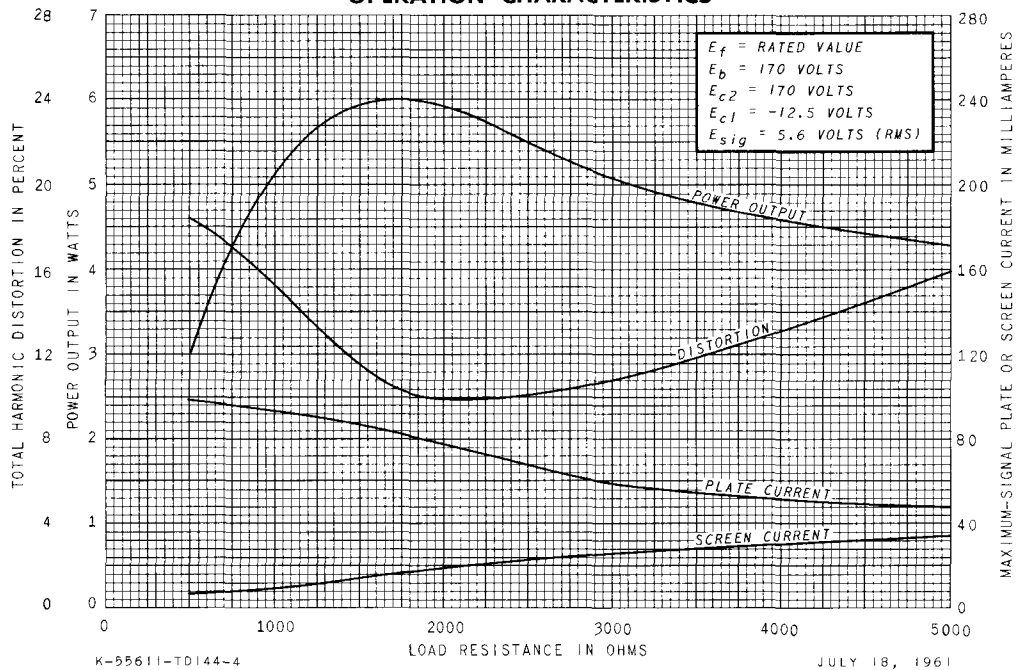
AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



OPERATION CHARACTERISTICS



RECEIVING TUBE DEPARTMENT