



TRIODE-PENTODE

DESCRIPTION AND RATING

The 6HZ8 is a 9-pin, T-9 tube containing a high-mu triode and a sharp-cutoff pentode. The triode is intended for use as a voltage amplifier or sync separator, and the pentode is intended for video amplifier service.

GENERAL

ELECTRICAL

Cathode—Coated Unipotential

Heater Characteristics and Ratings

Heater Voltage, AC or DC*.....6.3 $\pm$ 0.6 Volts

Heater Current†.....1.125 Amperes

Direct Interelectrode Capacitances‡

Pentode Section

Grid-Number 1 to Plate: (Pg1 to Pp), Max. 0.1 pf

Input: Pg1 to (h+k+Pg2+Pg3+i.s.).....12 pf

Output: Pp to (h+k+Pg2+Pg3+i.s.).....5.0 pf

Triode Section

Grid to Plate: (Tg to Tp).....5.0 pf

Input: Tg to (h+Tk).....3.8 pf

Output: Tp to (h+Tk).....0.4 pf

Pentode Grid-Number 1 to Triode Plate:

(Pg1 to Tp), Max. 0.005 pf

Triode Grid to Pentode Plate:

(Tg to Pp), Max. 0.04 pf

Pentode Plate to Triode Plate:

(Pp to Tp), Max. 0.2 pf

MECHANICAL

Operating Position—Any

Envelope—T-9, Glass

Base—E9-82, Small Button 9-Pin

Outline Drawing—EIA 9-77

Maximum Diameter.....1.188 Inches

Maximum Over-all Length.....2.990 Inches

Maximum Seated Height.....2.710 Inches

MAXIMUM RATINGS

DESIGN-MAXIMUM VALUES

Pentode Triode
Section Section

Plate Voltage.....330 300 Volts

Screen Supply Voltage.....330 ... Volts

Screen Voltage—See Screen Rating Chart

Positive DC Grid-Number 1 Voltage... 0 Volts

Plate Dissipation.....8.0 1.0 Watts

Screen Dissipation.....2.0 ... Watts

Pentode Triode
Section Section

Heater—Cathode Voltage

Heater Positive with Respect to Cathode

DC Component.....100 100 Volts

Total DC and Peak.....200 200 Volts

Heater Negative with Respect to Cathode

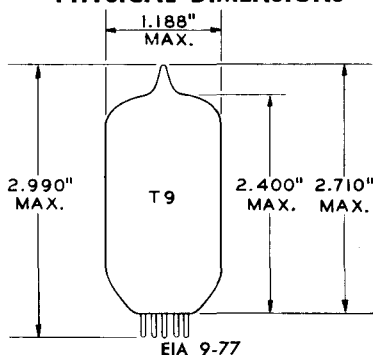
Total DC and Peak.....200 200 Volts

Grid-Number 1 Circuit Resistance

With Fixed Bias.....0.25 0.5 Megohms

With Cathode Bias.....1.0 1.0 Megohms

PHYSICAL DIMENSIONS



TERMINAL CONNECTIONS

Pin 1—Triode Cathode

Pin 2—Triode Grid

Pin 3—Triode Plate

Pin 4—Heater

Pin 5—Heater

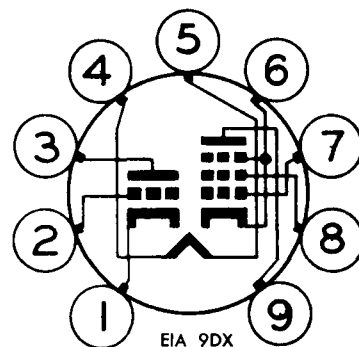
Pin 6—Pentode Cathode, Grid Number 3, and Internal Shield

Pin 7—Pentode Grid Number 1

Pin 8—Pentode Grid Number 2 (Screen)

Pin 9—Pentode Plate

BASING DIAGRAM



MAXIMUM RATINGS (CONT'D)

Design-Maximum 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 the worst probable conditions. The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making allowance 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, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of all other electron devices in the equipment.

CHARACTERISTICS AND TYPICAL OPERATION

CLASS A₁ AMPLIFIER

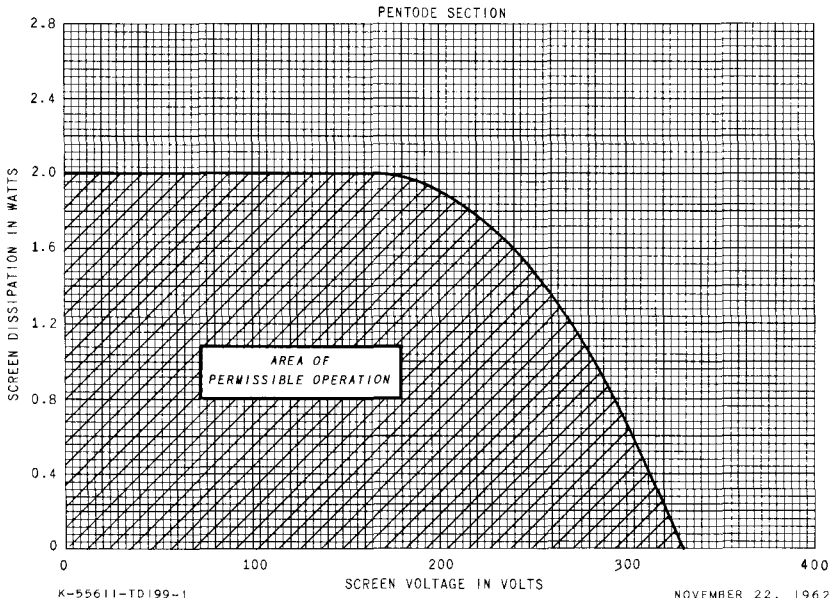
	Pentode Section		Triode Section	
Plate Voltage	60	250	200	Volts
Screen Voltage	170	170		Volts
Grid-Number 1 Voltage	0		-2.0	Volts
Cathode-Bias Resistor		100		Ohms
Amplification Factor			70	
Plate Resistance, approximate		140000		Ohms
Transconductance		12600	4000	Micromhos
Plate Current	90	29	3.5	Milliamperes
Screen Current	22.5	6.0		Milliamperes
Grid-Number 1 Voltage, approximate I _b = 10 Microamperes		-11.5	-5	Volts

NOTES

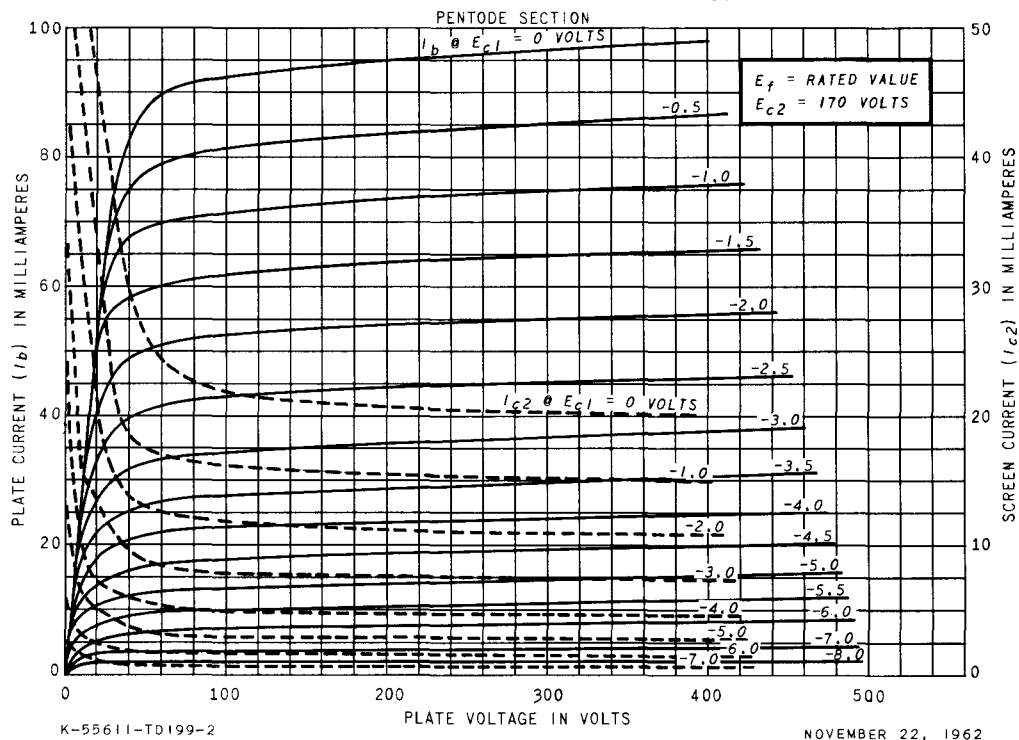
- * The equipment designer should design the equipment so that heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.
- † Heater current of a bogey tube at E_f = 6.3 volts.
- ‡ Without external shield.

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.

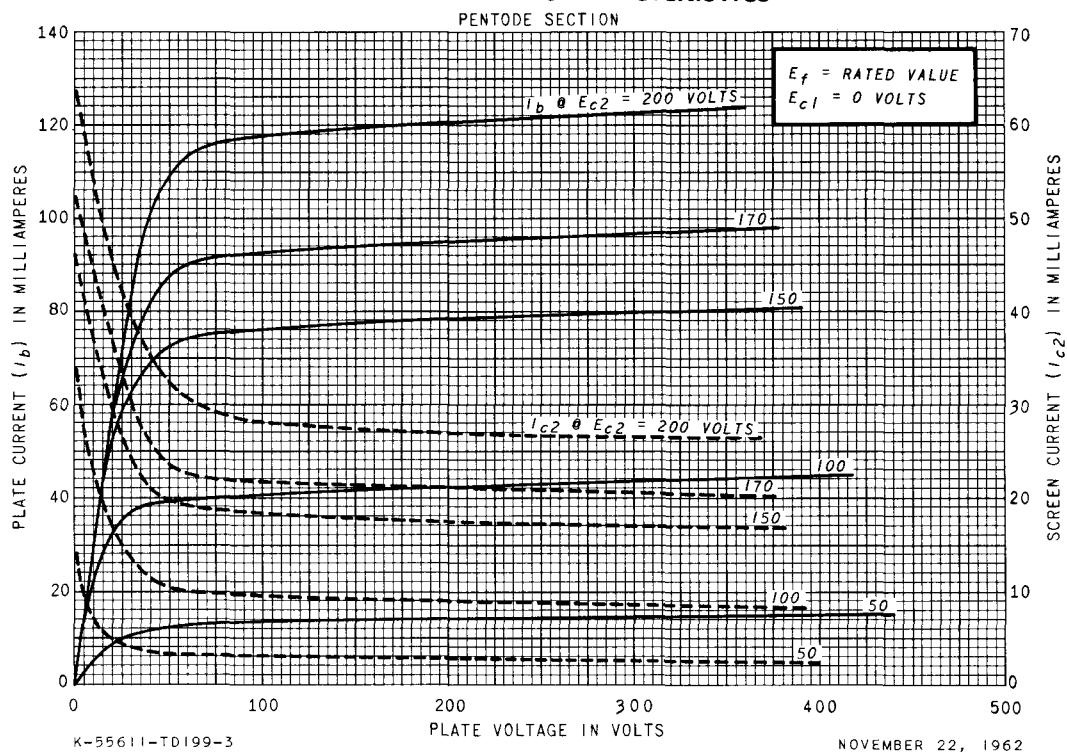
SCREEN RATING CHART



AVERAGE PLATE CHARACTERISTICS

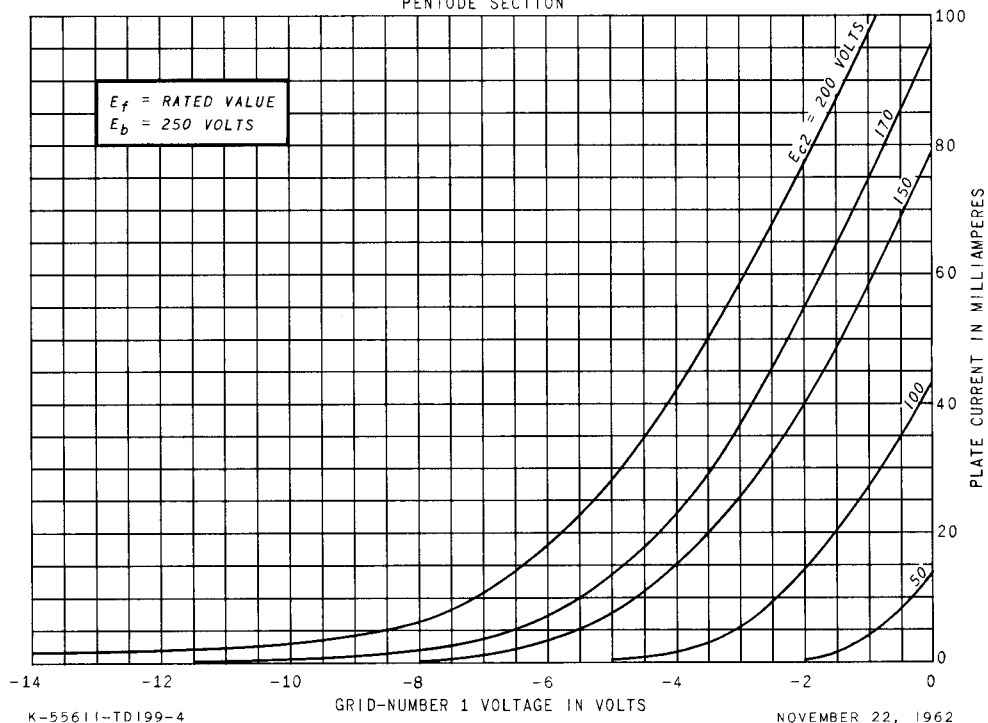


AVERAGE PLATE CHARACTERISTICS



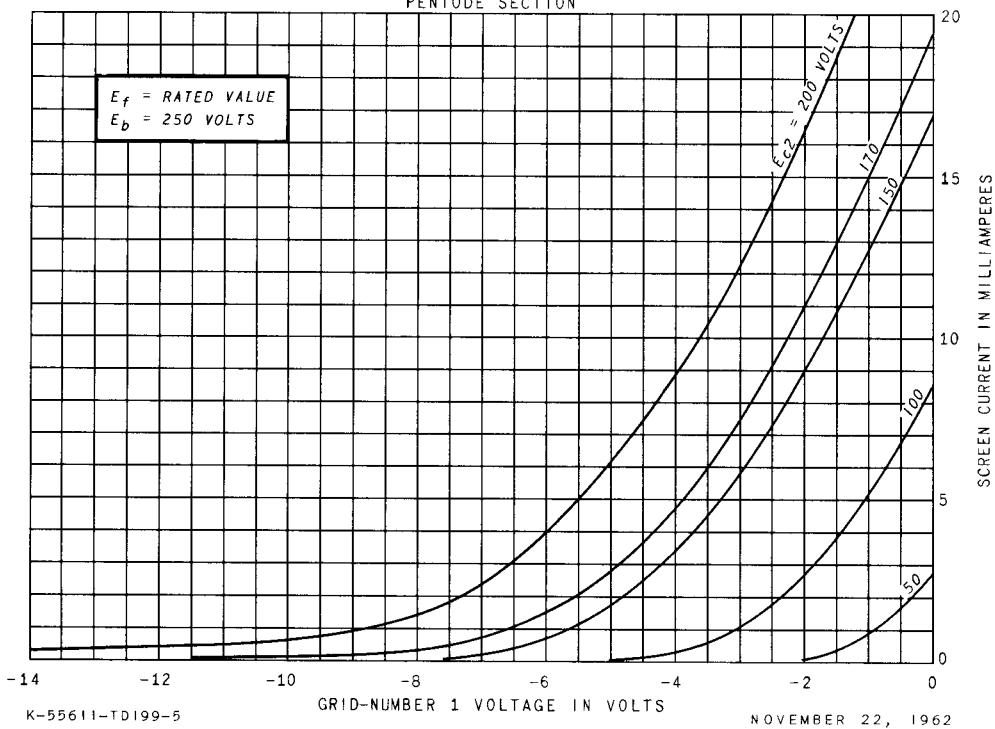
AVERAGE TRANSFER CHARACTERISTICS

PENTODE SECTION



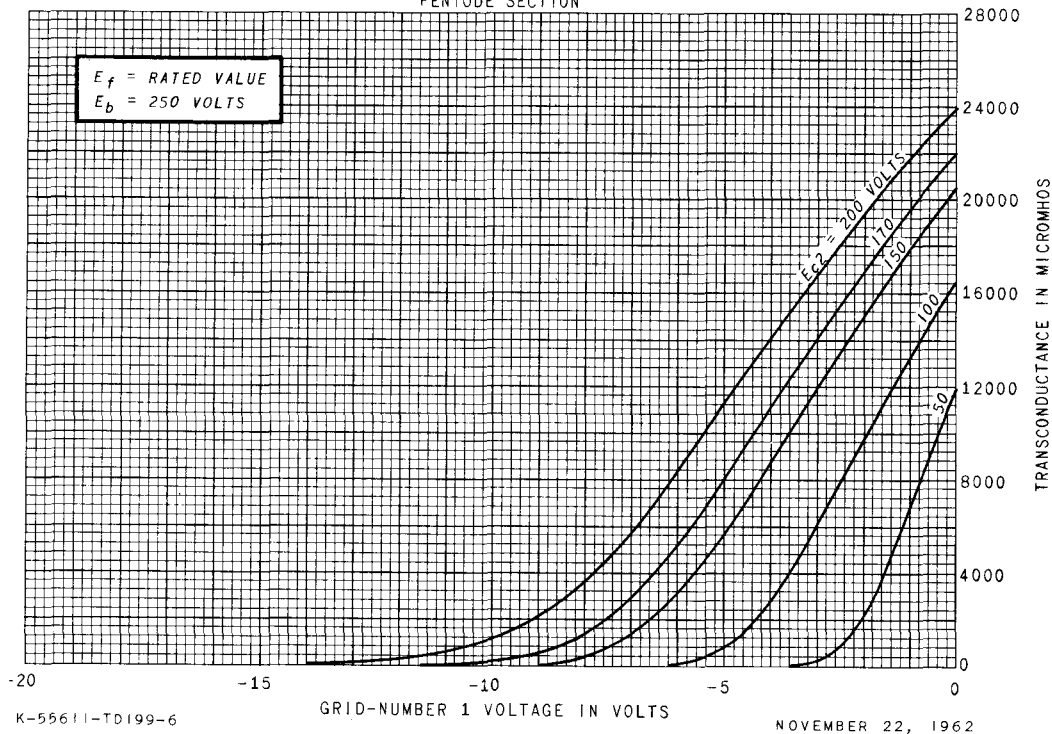
AVERAGE TRANSFER CHARACTERISTICS

PENTODE SECTION



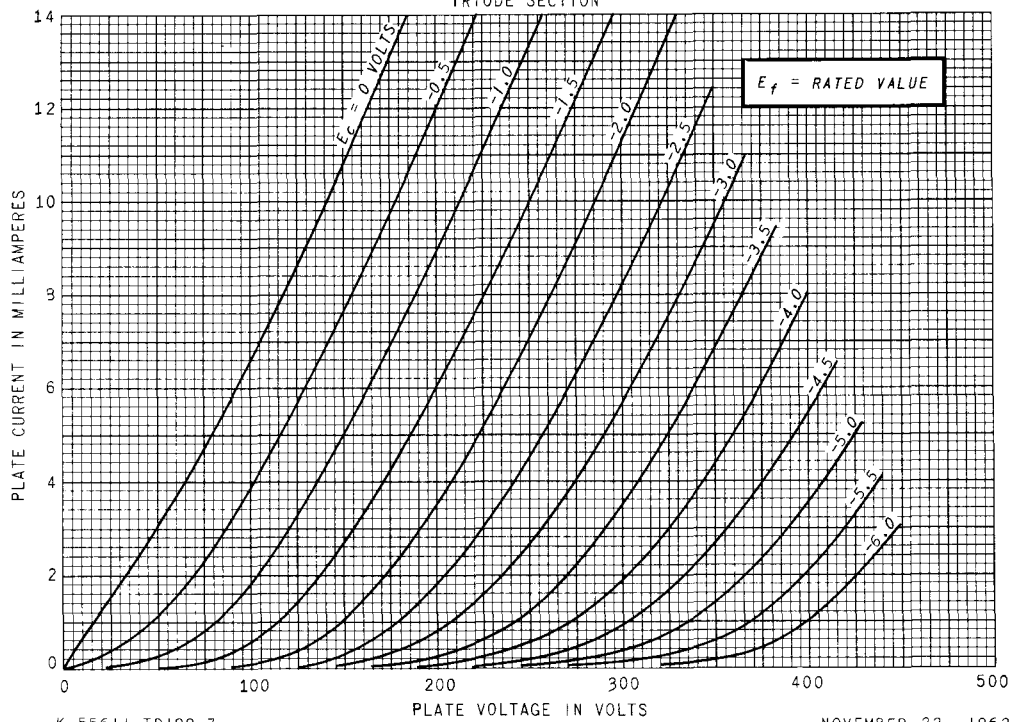
AVERAGE TRANSFER CHARACTERISTICS

PENTODE SECTION

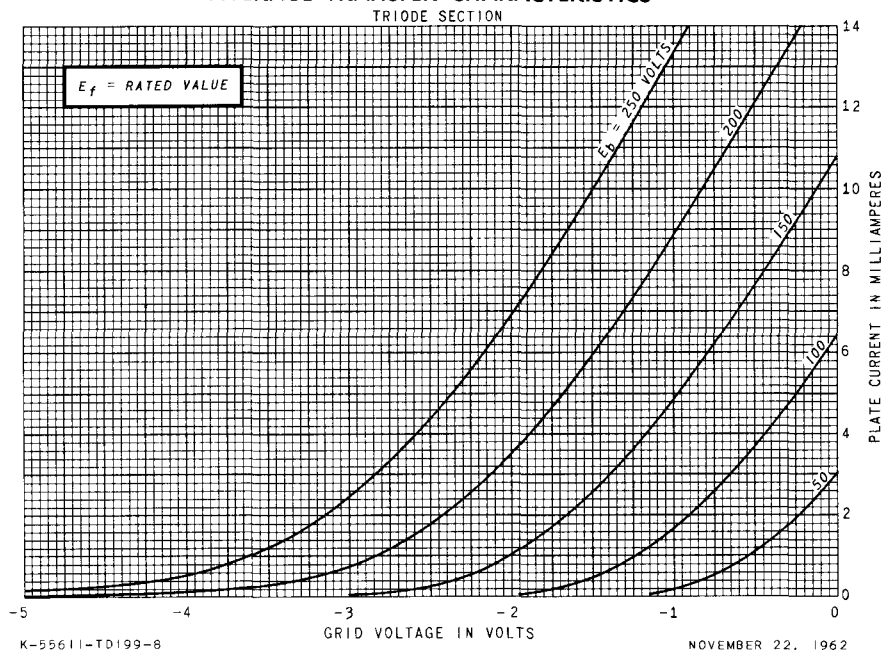


AVERAGE PLATE CHARACTERISTICS

TRIODE SECTION



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE CHARACTERISTICS

