



DESCRIPTION AND RATING

The 8068 is a beam pentode designed for use as a series regulator in high-voltage power supplies.

GENERAL

ELECTRICAL	MECHANICAL
Cathode—Coated Unipotential Heater Characteristics and Ratings Heater Voltage, AC or DC*..... 6.3 ± 0.6 Volts Heater Current†..... 0.9 Amperes Direct Interelectrode Capacitances‡ Grid to Plate: (g to p)..... 0.6 pf Input: g to (h + k + g2 + b.p.)... 10.0 pf Output: p to (h + k + g2 + b.p.)... 5.5 pf	Mounting Position—Any Envelope—T12, Glass Base—B5-149, Octal 8-Pin Top Cap—C1-1, Small Outline Drawing—EIA 12-20 Maximum Diameter..... $1\frac{9}{16}$ Inches Maximum Over-all Length..... $4\frac{5}{8}$ Inches Maximum Seated Height..... $4\frac{1}{16}$ Inches Minimum Seated Height..... $3\frac{1}{16}$ Inches

MAXIMUM RATINGS

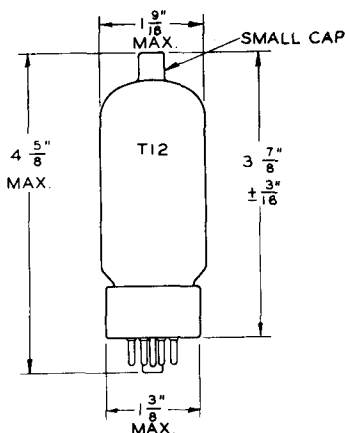
ABSOLUTE-MAXIMUM VALUES

Plate Voltage.....	3500	Volts
Screen Voltage.....	250	Volts
Plate Dissipation.....	35	Watts
Screen Dissipation.....	1.0	Watts
DC Cathode Current.....	100	Milliamperes

Heater-Cathode Voltage

Heater Positive with Respect to	
Cathode.....	200 Volts
Heater Negative with Respect to	
Cathode.....	200 Volts
Grid-Number 1 Circuit Resistance.....	0.1 Megohms

PHYSICAL DIMENSIONS

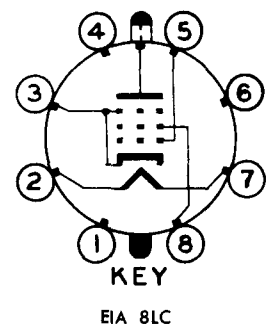


EIA 12-20

TERMINAL CONNECTIONS

- Pin 1—No Connection
- Pin 2—Heater
- Pin 3—Cathode and Beam Plates
- Pin 4—No Connection
- Pin 5—Grid Number 1
- Pin 6—No Connection
- Pin 7—Heater
- Pin 8—Grid Number 2 (Screen)
- Cap—Plate

BASING DIAGRAM



AVERAGE CHARACTERISTICS

Plate Voltage.....	3500	600	Volts
Screen Voltage.....	100	125	Volts
Grid-Number 1 Voltage.....	-30	-7.5	Volts
Plate Resistance, approximate.....	54500	Ohms	
Transconductance.....	5200	Micromhos	
Plate Current.....	1.0	36	Milliamperes

Screen Current..... 1.0 Milliamperes

* The equipment designer should design the equipment so that the 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.

Absolute-Maximum ratings are limiting values of operating and environmental conditions applicable to any 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 no allowance for equipment variations, environmental variations, and the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration and of

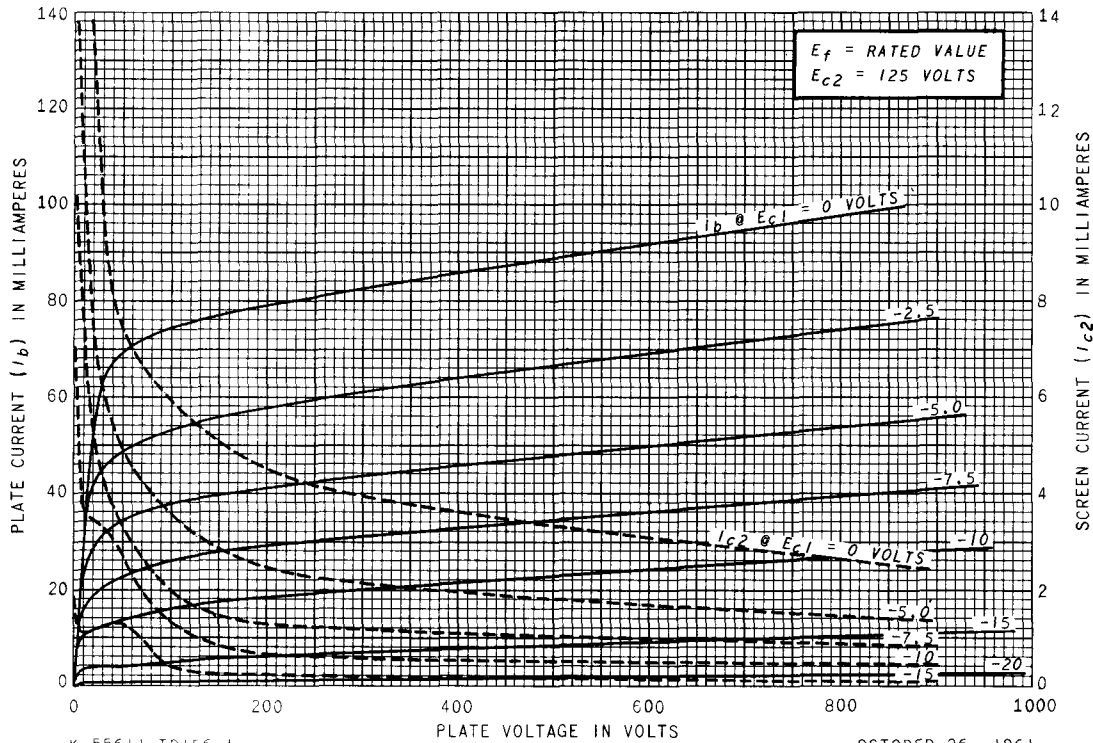
all other electron devices in the equipment.

The equipment manufacturer should design so that initially and throughout life no absolute-maximum value for the intended service is exceeded with any 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 the tube under consideration and of all other electron devices in the equipment.

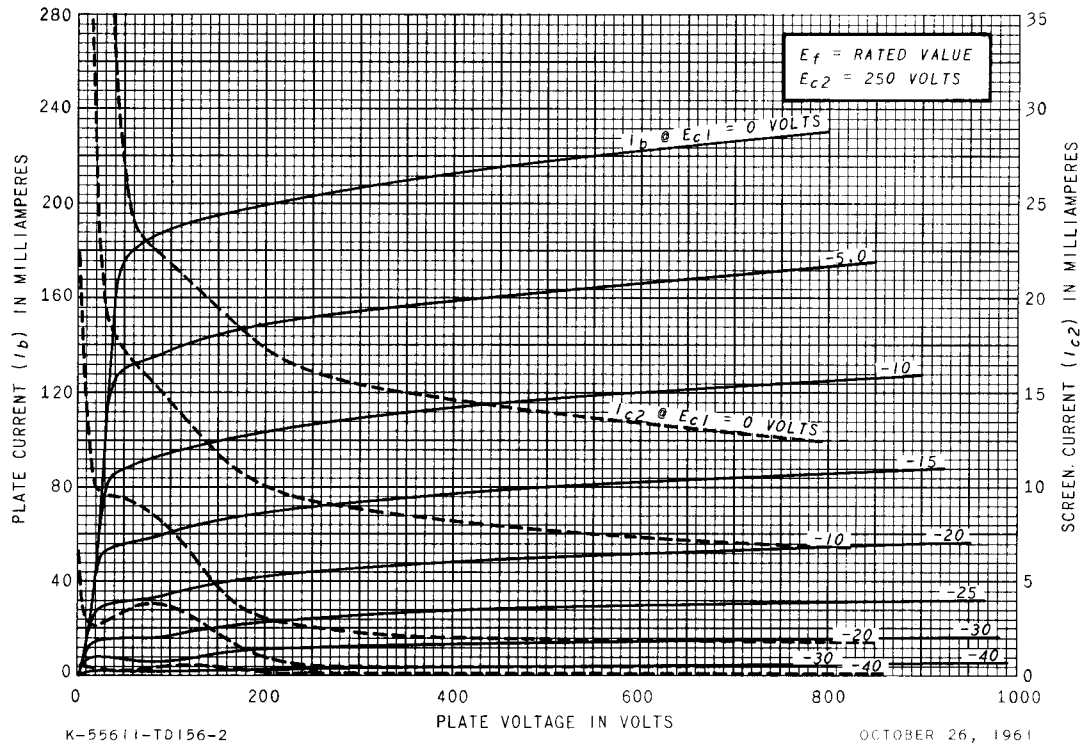
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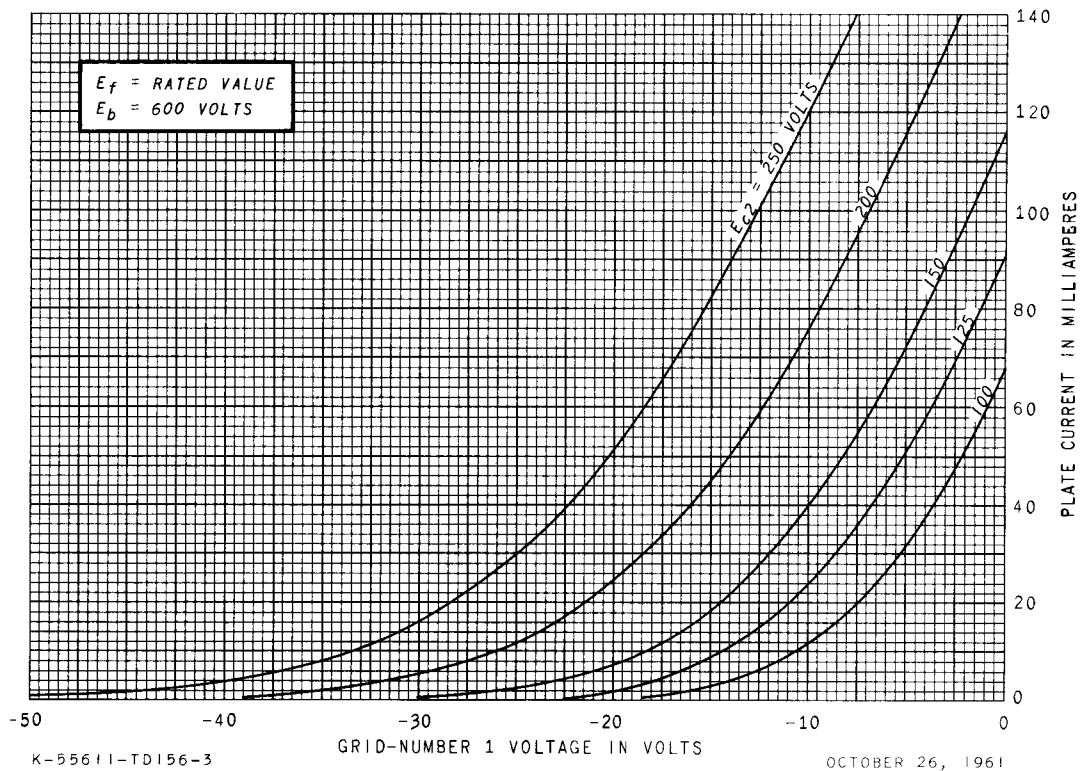
AVERAGE PLATE CHARACTERISTICS



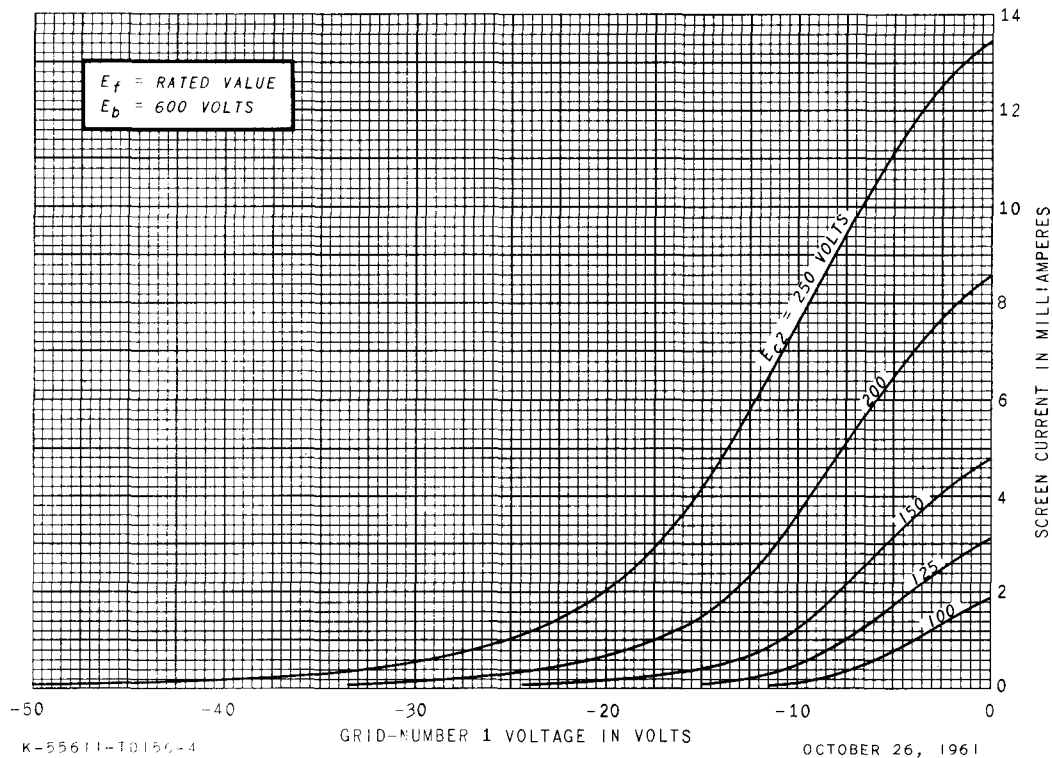
AVERAGE PLATE CHARACTERISTICS



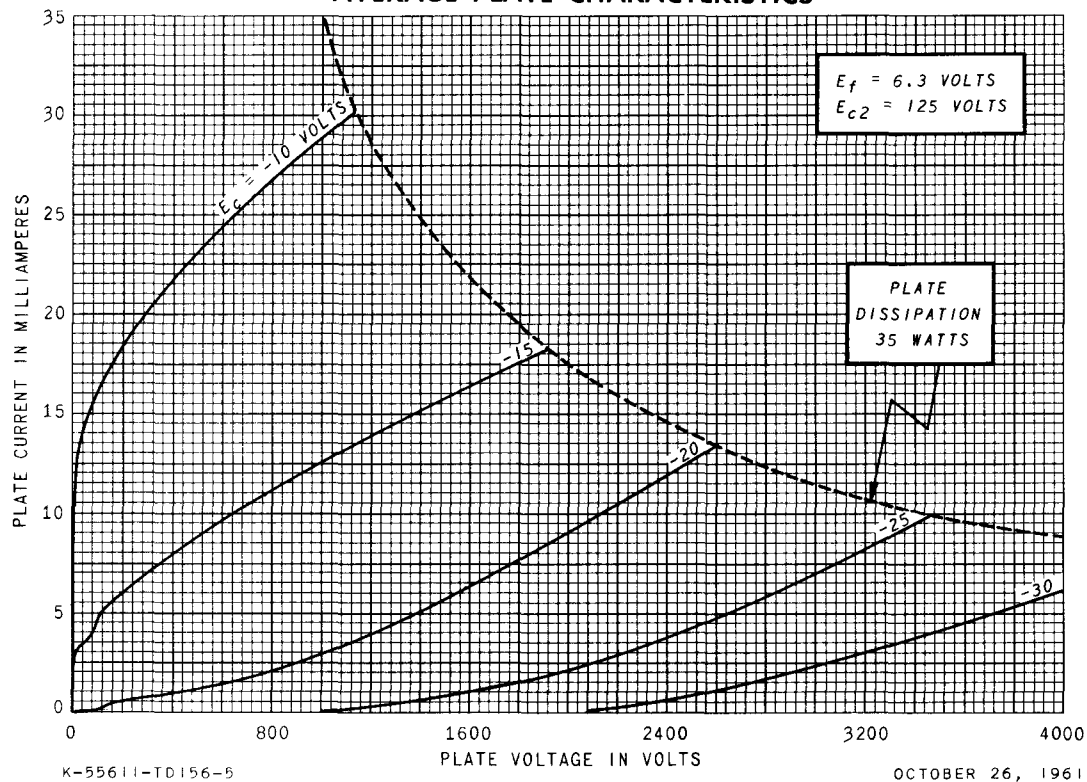
AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS



RECEIVING TUBE DEPARTMENT

GENERAL  ELECTRIC

Owensboro, Kentucky