



DESCRIPTION AND RATING

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

GENERAL

ELECTRICAL

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

MECHANICAL

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

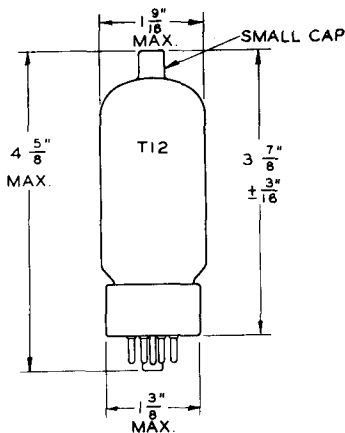
Cathode 200 Volts

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

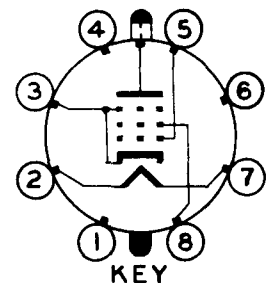
Pin 6—No Connection

Pin 7—Heater

Pin 8—Grid Number 2 (Screen)

Cap—Plate

BASING DIAGRAM



EIA 8LC

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

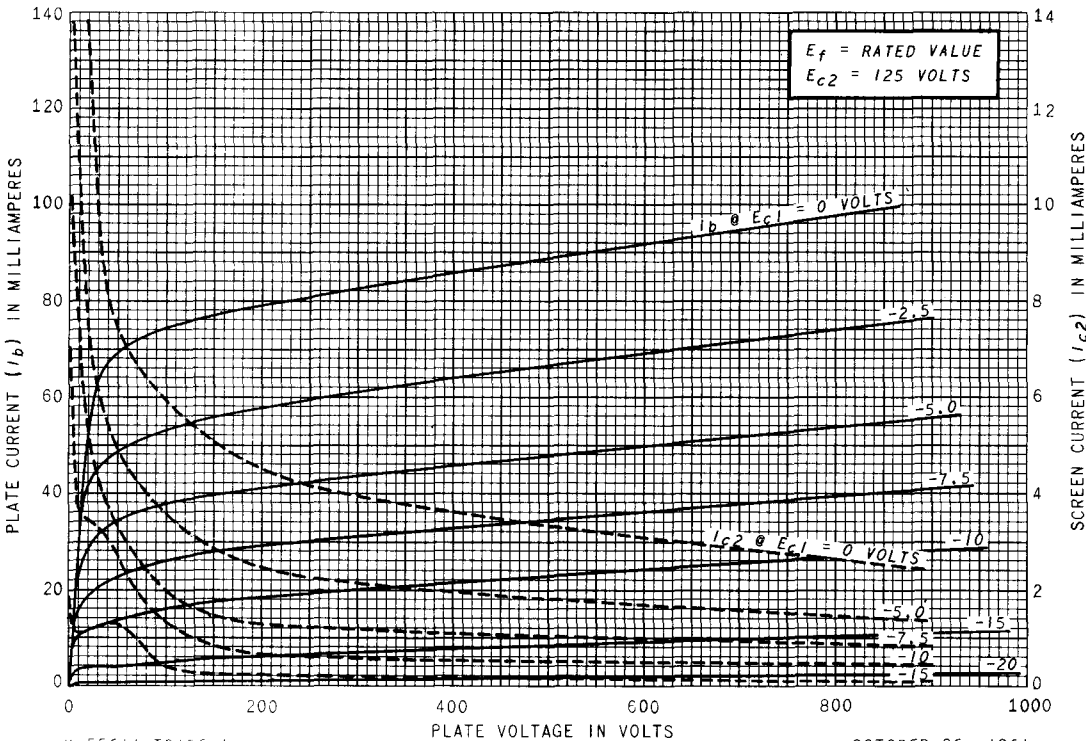
all other electron devices in the equipment.

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.

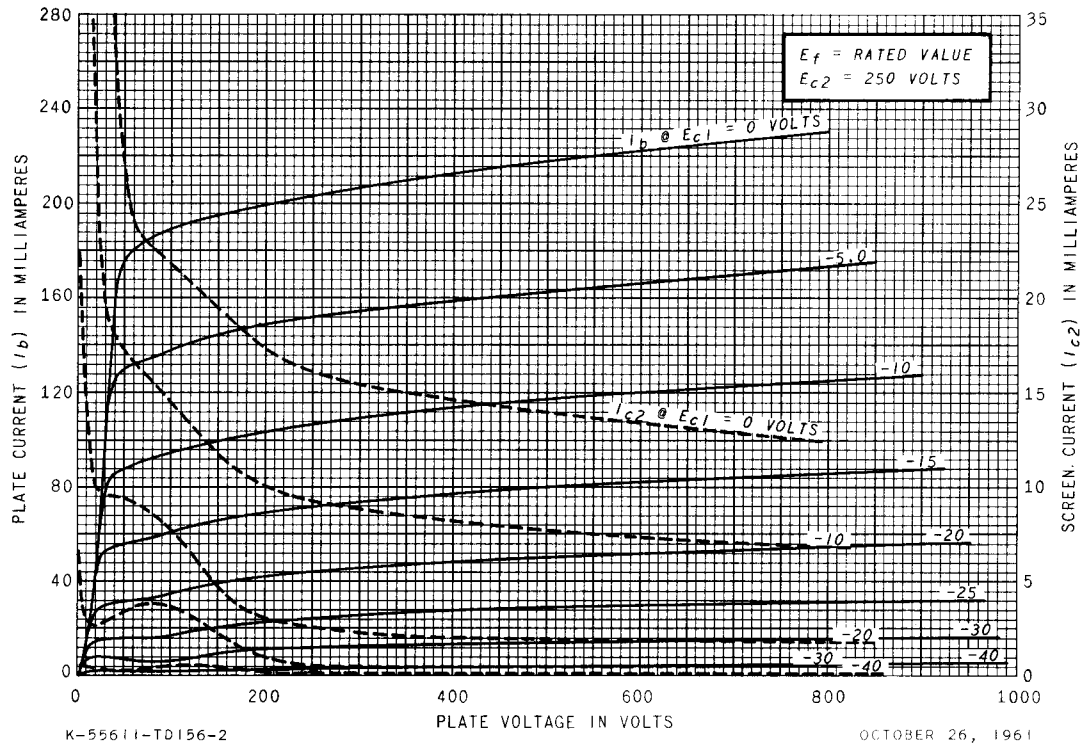
The tubes and arrangements disclosed herein may be covered by patents of General Electric Company or others. Neither the disclosure of any information herein nor the sale of tubes by General Electric Company conveys any license under patent claims covering combinations of tubes with other devices or

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.

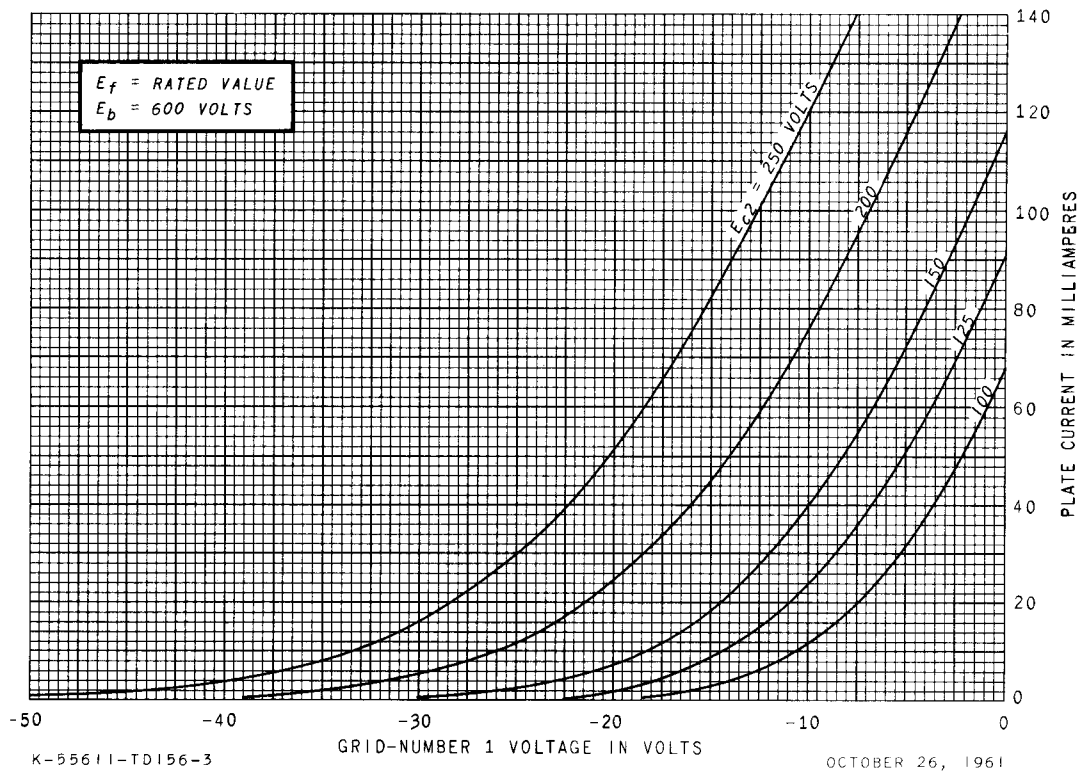
AVERAGE PLATE CHARACTERISTICS



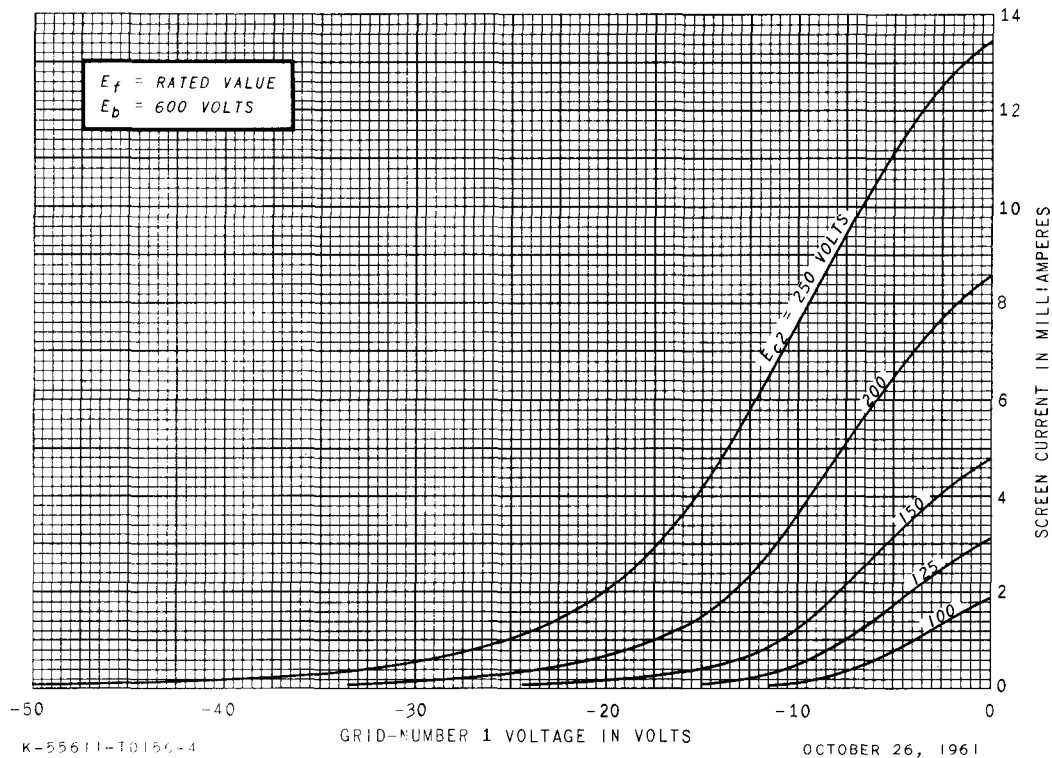
AVERAGE PLATE CHARACTERISTICS



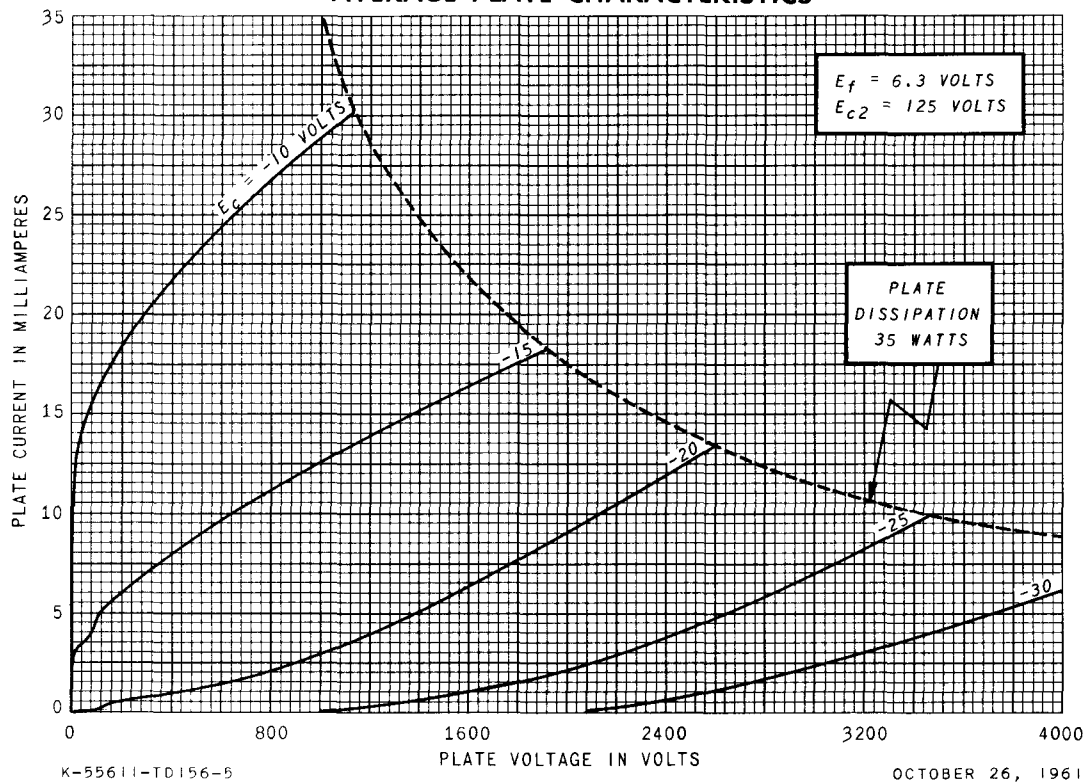
AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS



RECEIVING TUBE DEPARTMENT

GENERAL  ELECTRIC

Owensboro, Kentucky