

6BW11

**Compactron
Dissimilar Double Pentode**

- COLOR TV TYPE
- MULTI-FUNCTION
- FIRST VIDEO AMPLIFIER
- BANDPASS AMPLIFIER

The 6BW11 is a compactron containing two dissimilar sharp-cutoff pentodes. Section 1 is a medium performance video amplifier useful for reference frequency or first video amplifier applications in color television receivers. It has characteristics similar to the 6AU8 pentode. Section 2 features a high transconductance and is useful for bandpass amplifier, burst amplifier, sound IF or video IF applications in color television receivers. It is generally equivalent to the 6EW6.

GENERAL

ELECTRICAL

Cathode - Coated Unipotential

Heater Characteristics and Ratings

Heater Voltage, AC or DC* 6.3±0.6 Volts
 Heater Current† 0.8 Amperes
 Direct Interelectrode Capacitances‡

Section 1

Grid-Number 1 to Plate: (1g1 to 1p) . 0.03 pf

Input: 1g1 to (h + 1k + 1g2 + 1g3 + 2g3 + i.s.) 7.5 pf

Output: 1p to (h + 1k + 1g2 + 1g3 + 2g3 + i.s.) 2.8 pf

Section 2

Grid-Number 1 to Plate: (2g1 to 2p) . 0.03 pf

Input: 2g1 to (h + 2k + 2g2 + 2g3 + 1g3 + i.s.) 12 pf

Output: 2p to (h + 2k + 2g2 + 2g3 + 1g3 + i.s.) 2.8 pf

Coupling

Cathode, Section 1 to Cathode,

Section 2: (1k to 2k), maximum . 0.003 pf
 Grid-Number 1, Section 1 to Plate,

Section 2: (1g1 to 2p), maximum . 0.004 pf
 Grid-Number 1, Section 2 to Plate,

Section 1: (2g1 to 1p), maximum . 0.003 pf
 Plate, Section 1 to Plate,

Section 2: (1p to 2p), maximum . 0.018 pf

MECHANICAL

Operating Position - Any

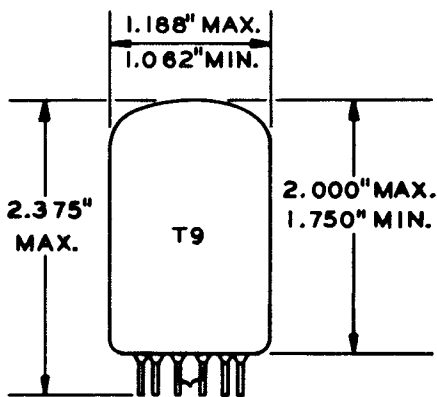
Envelope - T-9, Glass

Base - E12-70, Button 12-Pin

Outline Drawing - EIA 9-58

Maximum Diameter 1.188 Inches
 Minimum Diameter 1.062 Inches
 Maximum Over-all Length 2.375 Inches
 Maximum Seated Height 2.000 Inches
 Minimum Seated Height 1.750 Inches

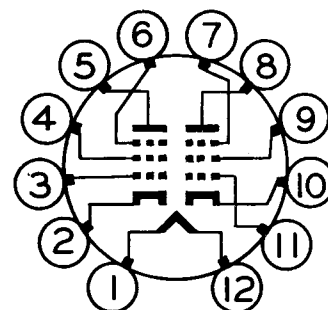
PHYSICAL DIMENSIONS



TERMINAL CONNECTIONS

- Pin 1 - Heater
- Pin 2 - Cathode (Section 2)
- Pin 3 - Grid Number 1 (Section 2)
- Pin 4 - Grid Number 2 (Screen) (Section 2)
- Pin 5 - Plate (Section 2)
- Pin 6 - Grid Number 3 (Suppressor) and Internal Shield (Section 2)
- Pin 7 - Grid Number 3 (Suppressor) and Internal Shield (Section 1)
- Pin 8 - Plate (Section 1)
- Pin 9 - Grid Number 2 (Screen) (Section 1)
- Pin 10 - Cathode (Section 1)
- Pin 11 - Grid Number 1 (Section 1)
- Pin 12 - Heater

BASING DIAGRAM



EIA 12HD

MAXIMUM RATINGS

DESIGN-MAXIMUM VALUES

	Section 1	Section 2	
Plate Voltage	330	330	Volts
Screen Supply Voltage	330	330	Volts
Screen Voltage - See Screen Rating Chart			
Positive DC Grid-Number 1 Voltage	0	0	Volts
Plate Dissipation	4.0	3.1	Watts
Screen Dissipation	0.8	0.65	Watts
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 Cathode Bias	0.25	0.25	Megohms

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

AVERAGE CHARACTERISTICS

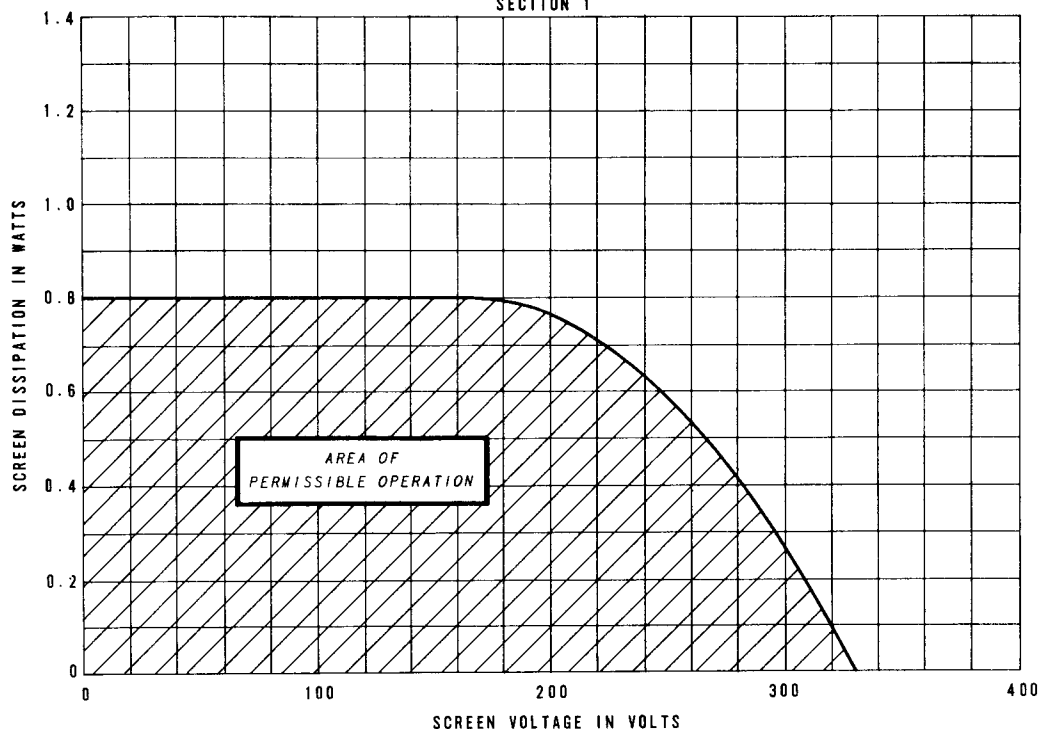
	Section 1	Section 2	
Plate Voltage	125	125	Volts
Suppressor, Connected to Cathode at Socket			
Screen Voltage	125	125	Volts
Cathode-Bias Resistor	56	56	Ohms
Plate Resistance, approximate	0.12	0.2	Megohms
Transconductance	8500	13000	Micromhos
Plate Current	22	11	Milliamperes
Screen Current	4.8	3.8	Milliamperes
Grid-Number 1 Voltage, approximate			
I _b = 20 Microamperes	-9.5	-3	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.
- § With external shield (EIA 309) connected to cathode of section under test unless otherwise indicated.
- ¶ With external shield (EIA 309) connected to ground.

SCREEN RATING CHART

SECTION 1

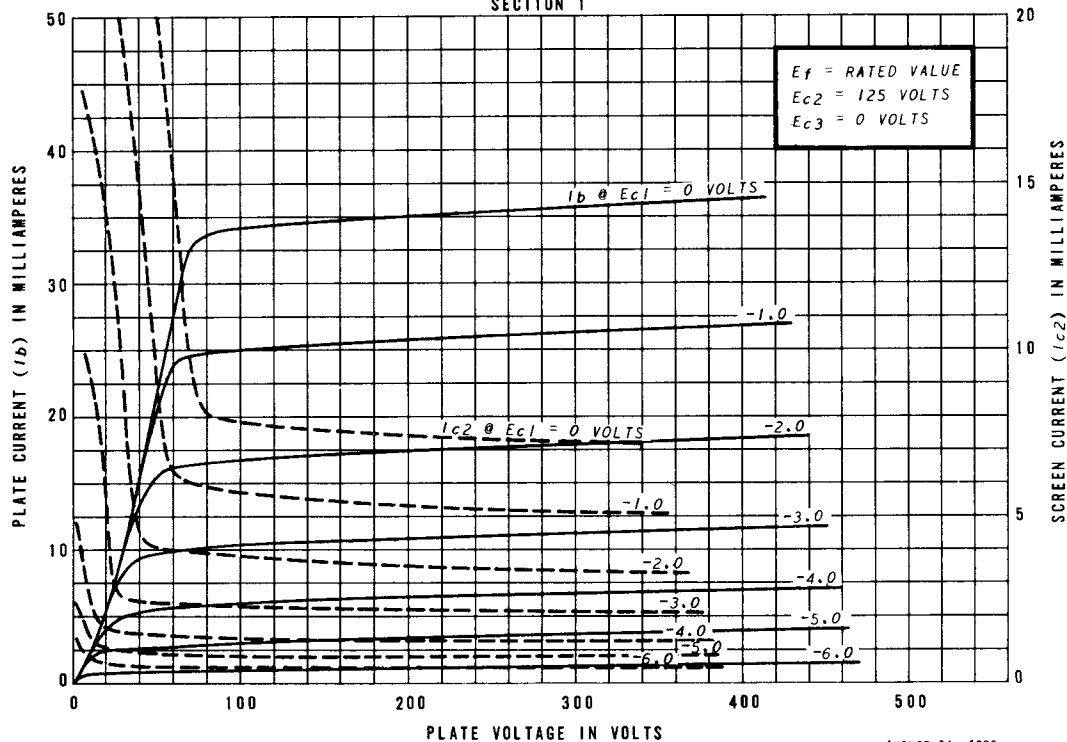


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AUGUST 24, 1966

AVERAGE PLATE CHARACTERISTICS

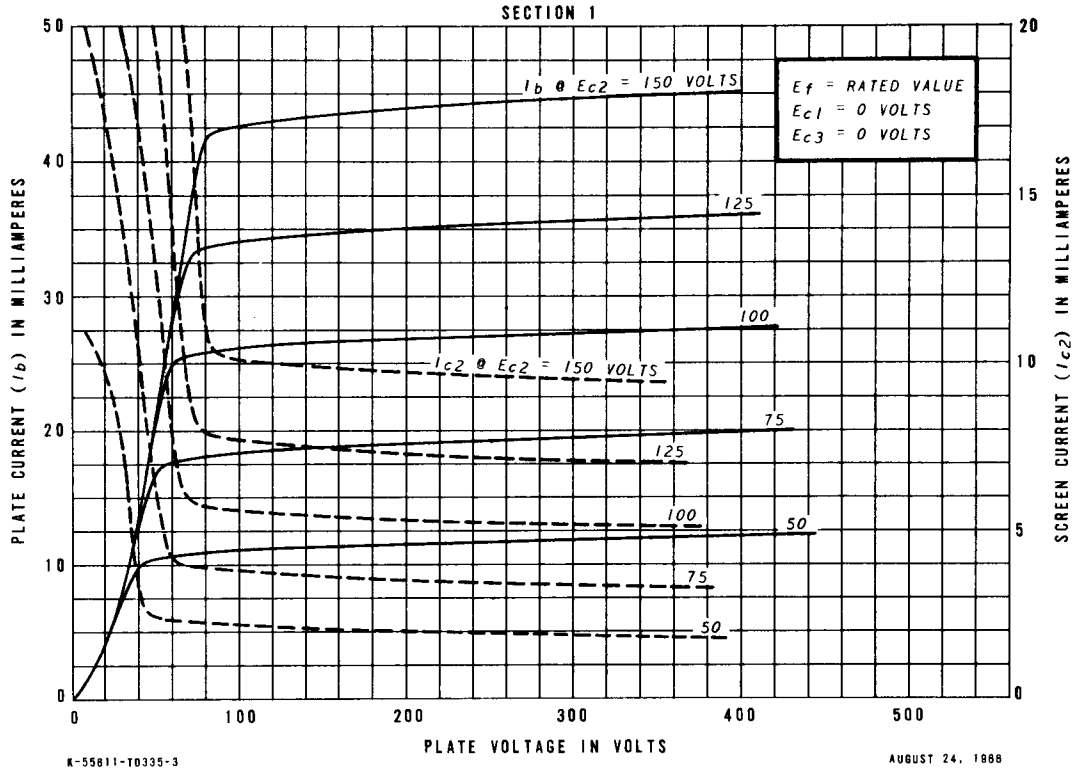
SECTION 1



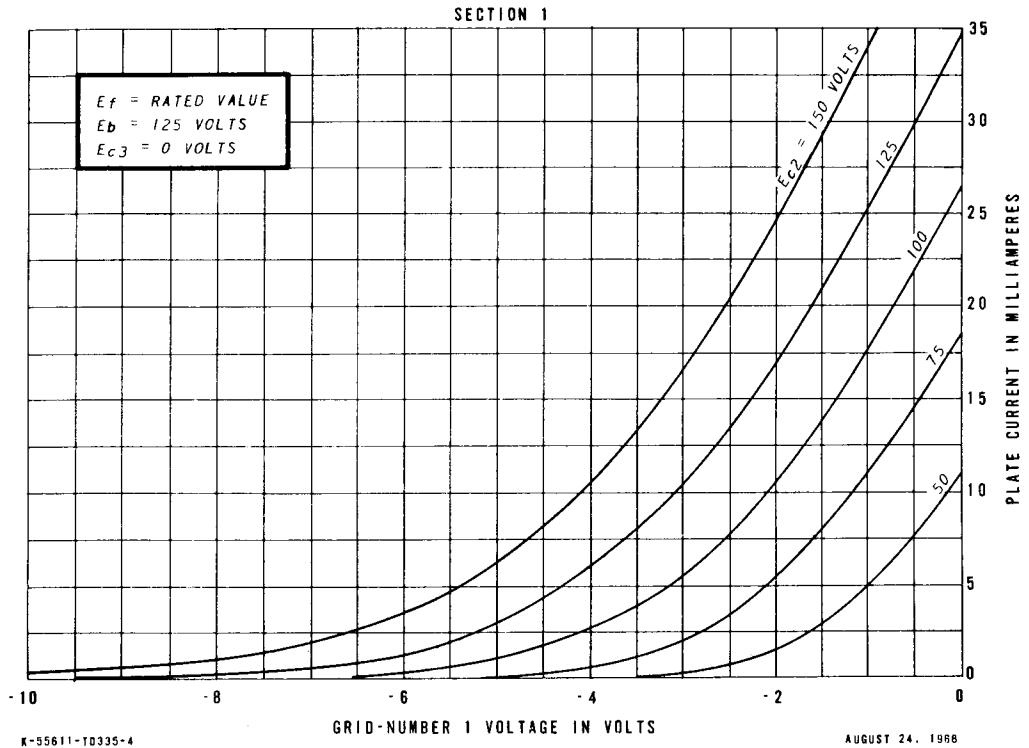
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AVERAGE PLATE CHARACTERISTICS

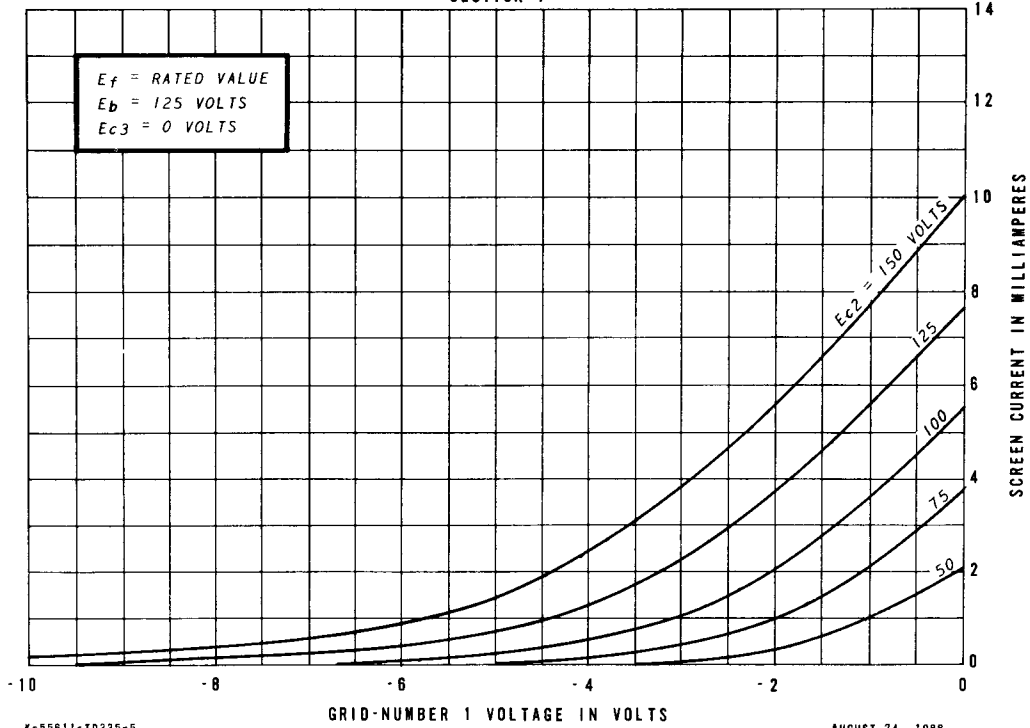


AVERAGE TRANSFER CHARACTERISTICS



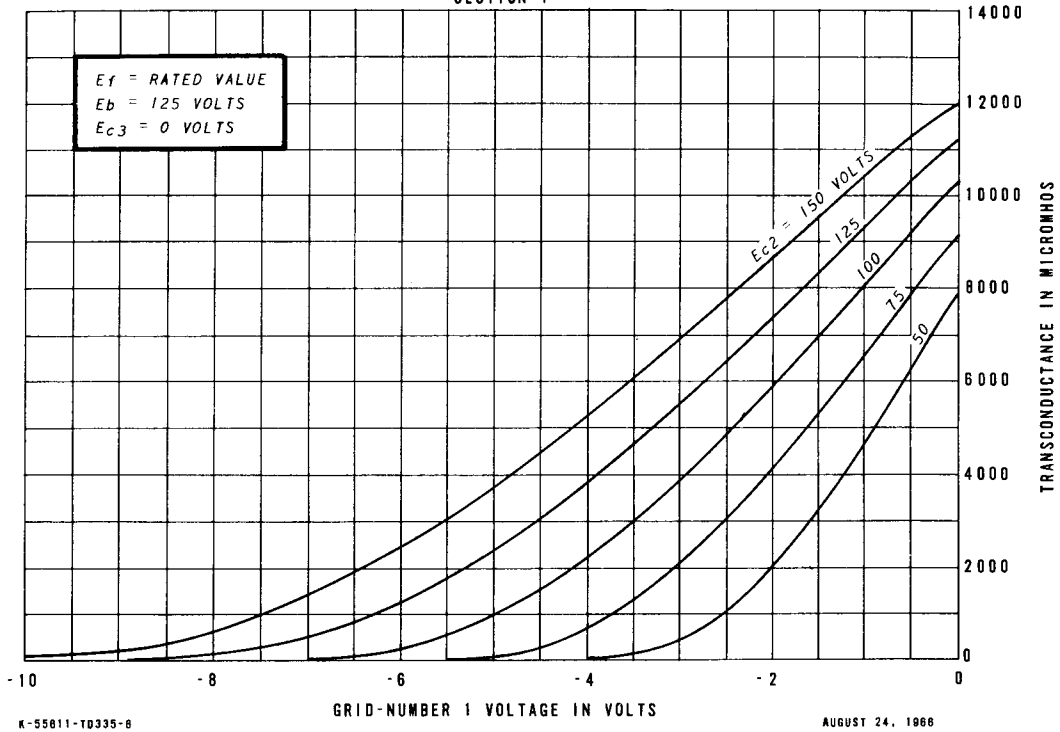
AVERAGE TRANSFER CHARACTERISTICS

SECTION 1



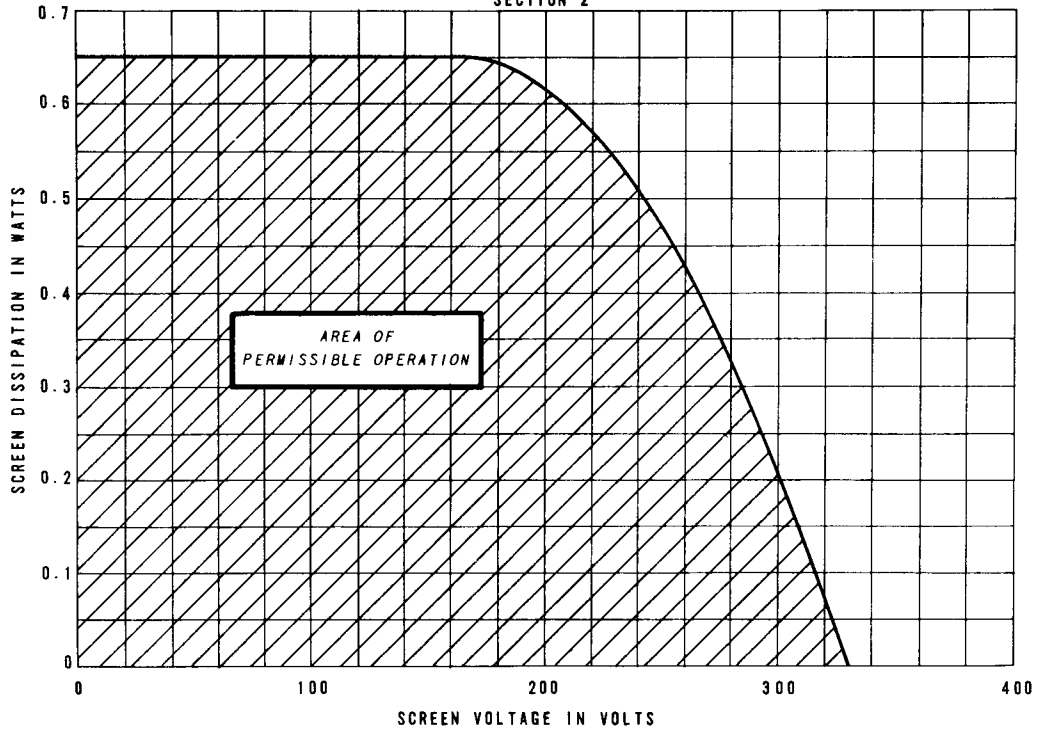
AVERAGE TRANSFER CHARACTERISTICS

SECTION 1



SCREEN RATING CHART

SECTION 2

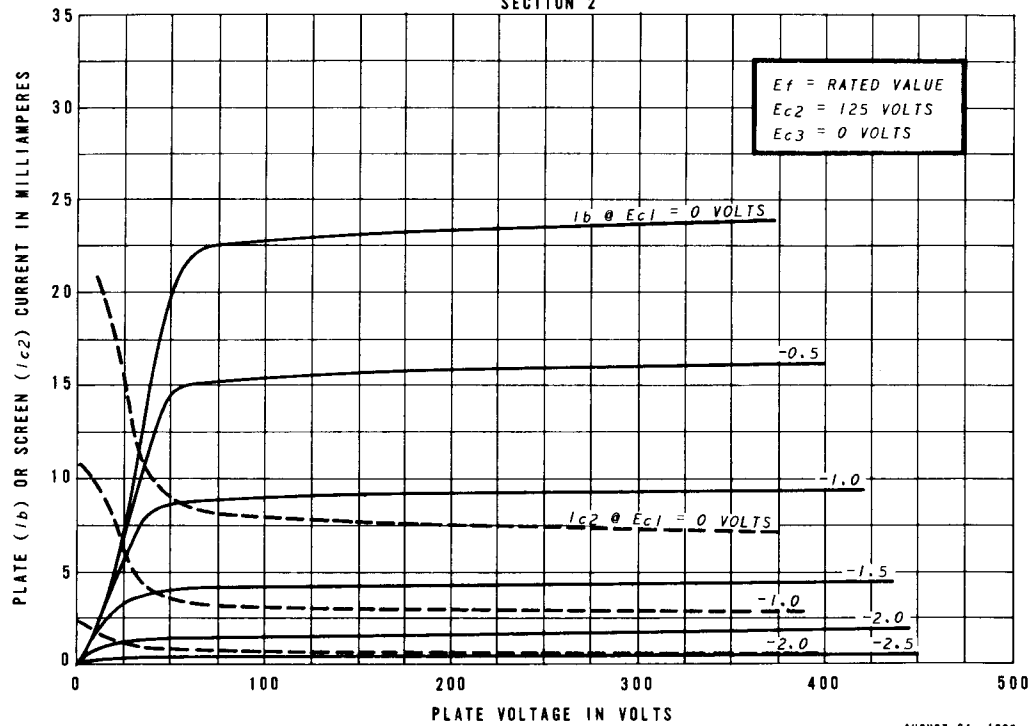


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AVERAGE PLATE CHARACTERISTICS

SECTION 2

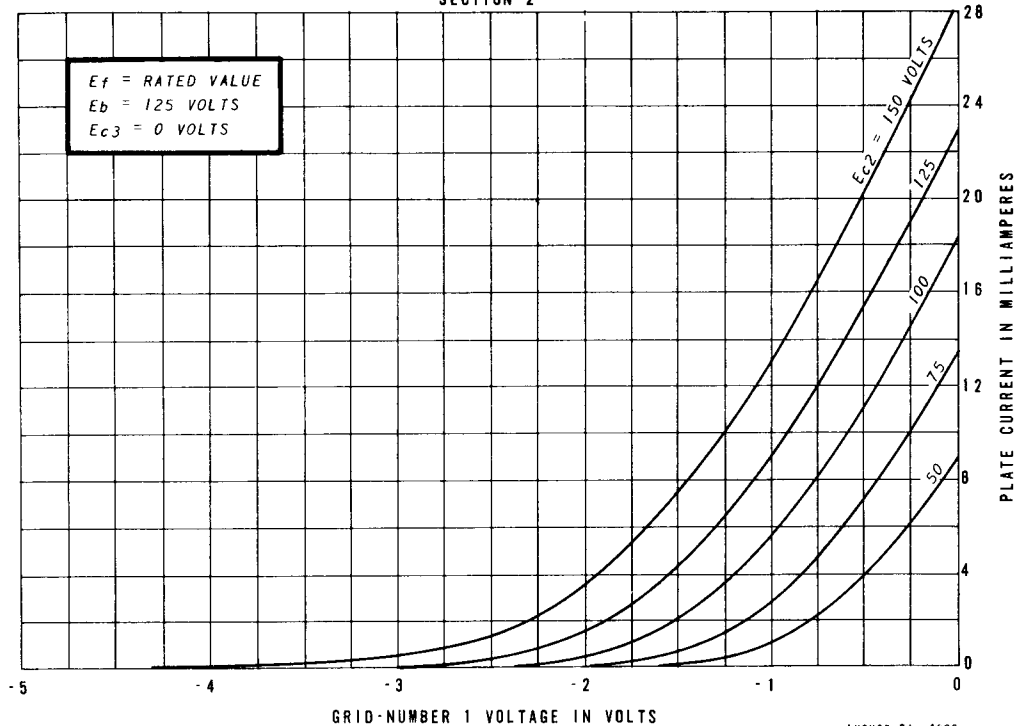


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AVERAGE TRANSFER CHARACTERISTICS

SECTION 2

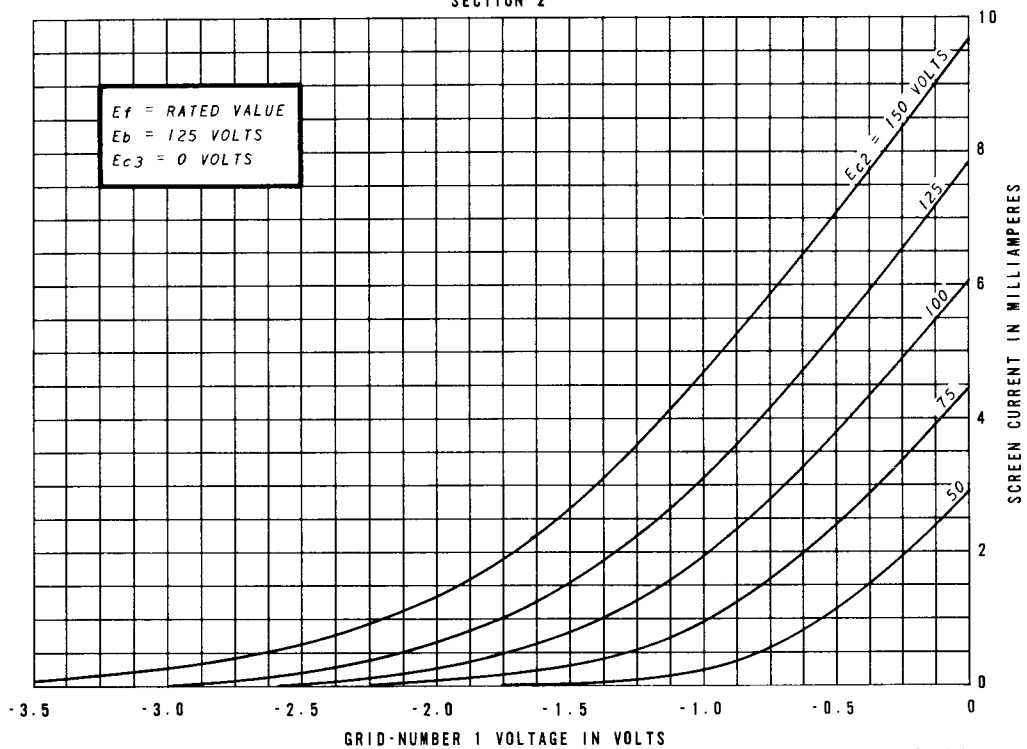


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AVERAGE TRANSFER CHARACTERISTICS

SECTION 2

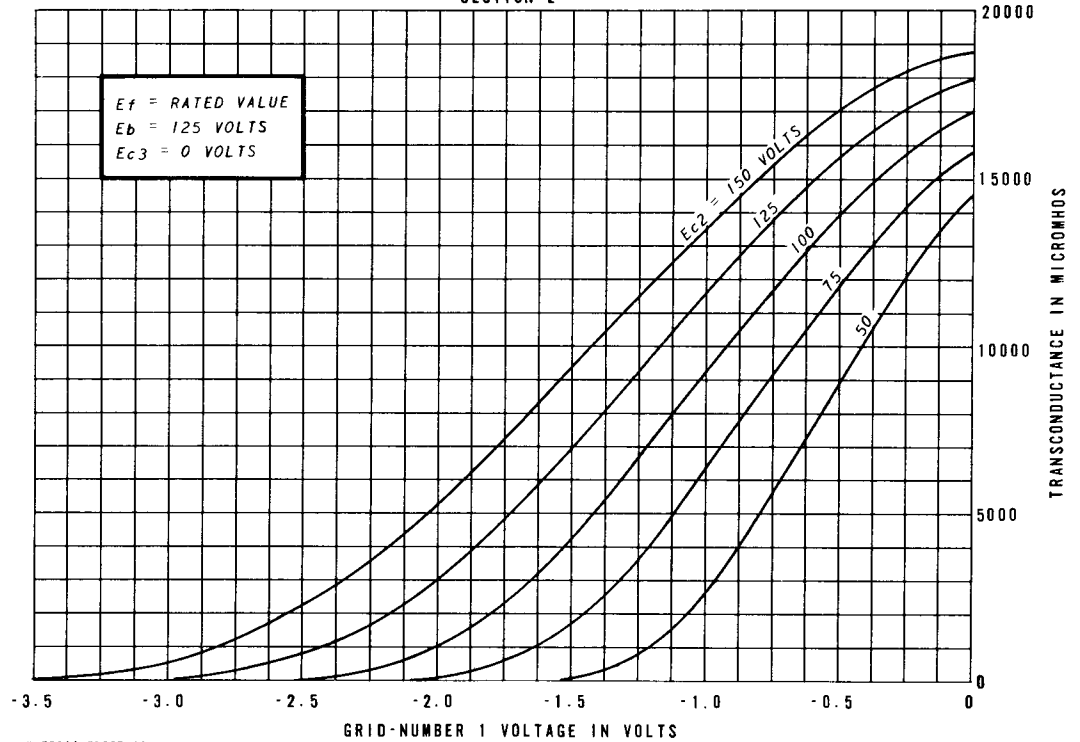


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AVERAGE TRANSFER CHARACTERISTICS

SECTION 2



K-55611-TD335-11

AUGUST 24, 1966

TUBE DEPARTMENT

GENERAL  ELECTRIC

Owensboro, Kentucky