Compactron Twin Pentode

6BV11

FOR COLOR DEMODULATOR APPLICATIONS

- COLOR TV TYPE
- DUAL-CONTROL
- LOW LEVEL COLOR DEMODULATORS

The 6BV11 is a compactron containing twin, dual-control, sharp-cutoff pentodes designed for use as color demodulators in color television receivers. Grids 1 and 3 may be used as independent control electrodes.

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, Each Section§
Grid-Number 1 to Plate: (g1 to p). 0.10 pf
Grid-Number 3 to Plate: (g3 to p). 3.2 pf
Input: g1 to (h + k + g2 + g3 + i.s.). . . . . 7.5 pf
Grid-Number 3 to All: g3 to (h + k + g1 + g2 + p + i.s.) . . . 7.5 pf
Grid-Number 1 to Grid-Number 3: (g1 to g3). . . . . 0.10 pf

MECHANICAL

Operating Position - Any
Envelope - T-9, Glass
Base - E12-70, Button 12-Pin
Outline Drawing - EIA 9-59
Maximum Diameter . . . . . 1.188 Inches
Minimum Diameter . . . . . 1.062 Inches
Maximum Over-all Length . . . . 2.625 Inches
Maximum Seated Height. . . . . 2.250 Inches
Minimum Seated Height. . . . . 2.000 Inches

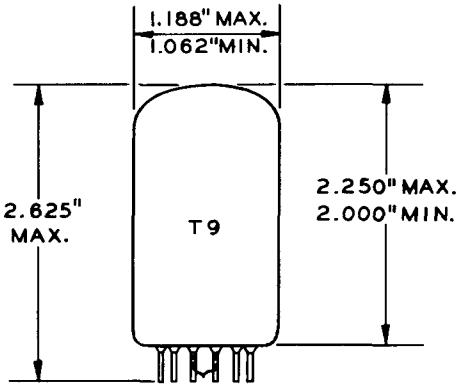
MAXIMUM RATINGS

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.

PHYSICAL DIMENSIONS

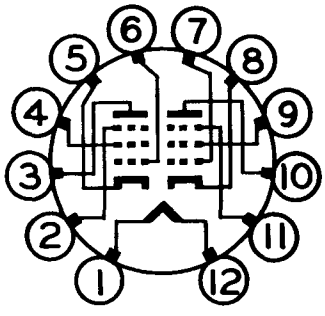


EIA 9-59

TERMINAL CONNECTIONS

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

BASING DIAGRAM



EIA 12HB

MAXIMUM RATINGS (Cont'd)

DESIGN-MAXIMUM VALUES, EACH SECTION

Plate Voltage	300	Volts
Grid-Number 3 Voltage		
Positive Value (DC and Peak)	25	Volts
Negative Value (DC and Peak)	100	Volts
Screen-Supply Voltage	300	Volts
Screen Voltage - See Screen Rating Chart		
Positive DC Grid-Number 1 Voltage	0	Volts
Negative DC Grid-Number 1 Voltage	50	Volts
Plate Dissipation	1.7	Watts
Screen Dissipation	1.0	Watts
Heater-Cathode Voltage		
Heater Positive with Respect to Cathode		
DC Component	100	Volts
Total DC and Peak	200	Volts
Heater Negative with Respect to Cathode		
Total DC and Peak	200	Volts
Grid-Number 1 Circuit Resistance		
With Fixed Bias	0.22	Megohms
With Cathode Bias	0.47	Megohms
Grid-Number 3 Circuit Resistance	0.68	Megohms

CHARACTERISTICS AND TYPICAL OPERATION

AVERAGE CHARACTERISTICS, EACH SECTION

Plate Supply Voltage	150	Volts
Grid-Number 3 Supply Voltage	0	Volts
Screen Supply Voltage	100	Volts
Cathode-Bias Resistor	180	Ohms
Amplification Factor, Grid-Number 3 to Plate	70	
Plate Resistance, approximate	0.2	Megohms
Transconductance, Grid-Number 1 to Plate	3700	Micromhos
Transconductance, Grid-Number 3 to Plate	400	Micromhos
Plate Current	3.6	Milliamperes
Screen Current	2.0	Milliamperes
Grid-Number 1 Voltage, approximate		
Ib = 75 Microamperes	-3.0	Volts
Grid-Number 3 Voltage, approximate		
Ib = 85 Microamperes	-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.

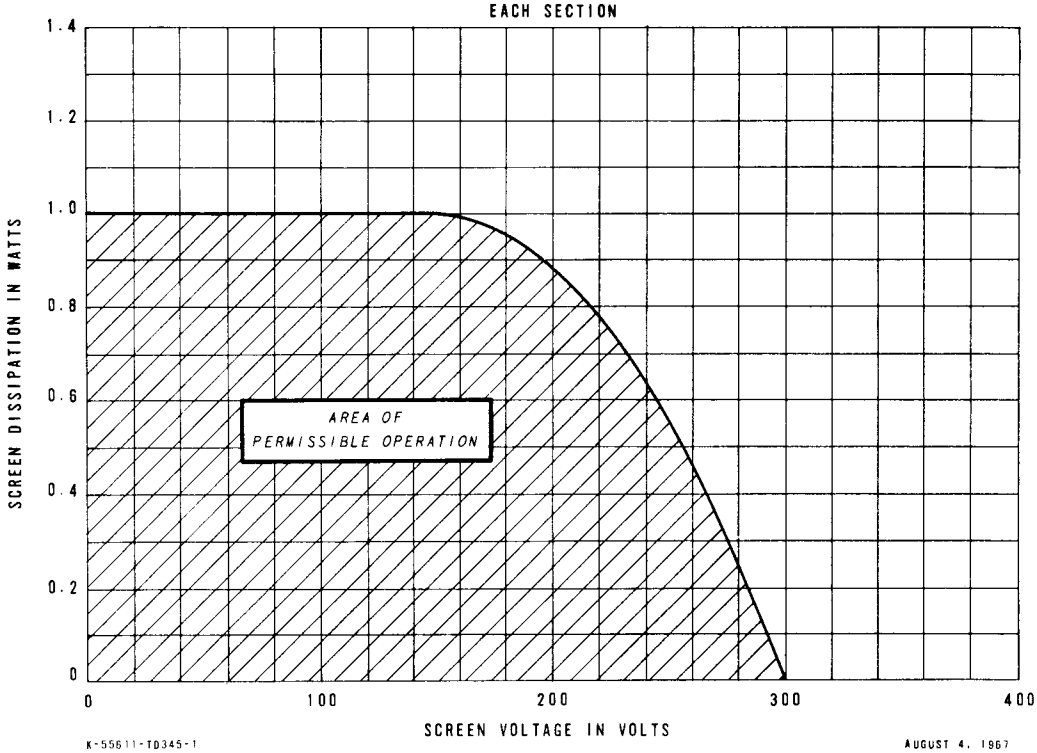
‡ Heater current of a bogey tube at Ef = 6.3 volts.

§ 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.

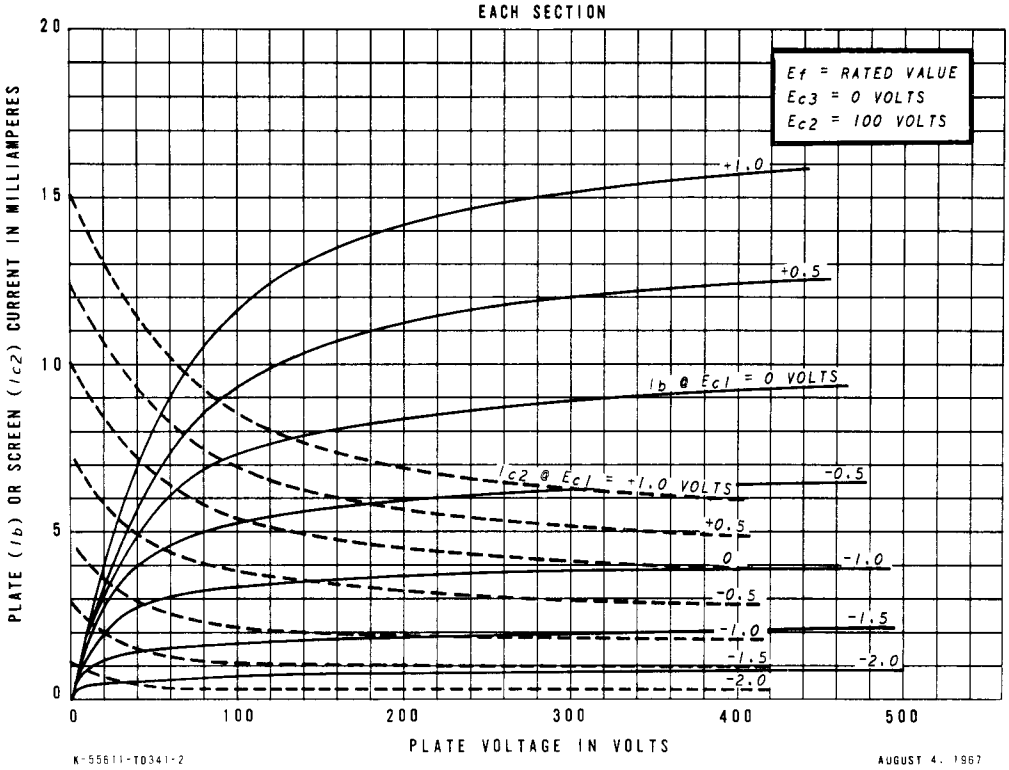
SCREEN RATING CHART

EACH SECTION



AVERAGE PLATE CHARACTERISTICS

EACH SECTION



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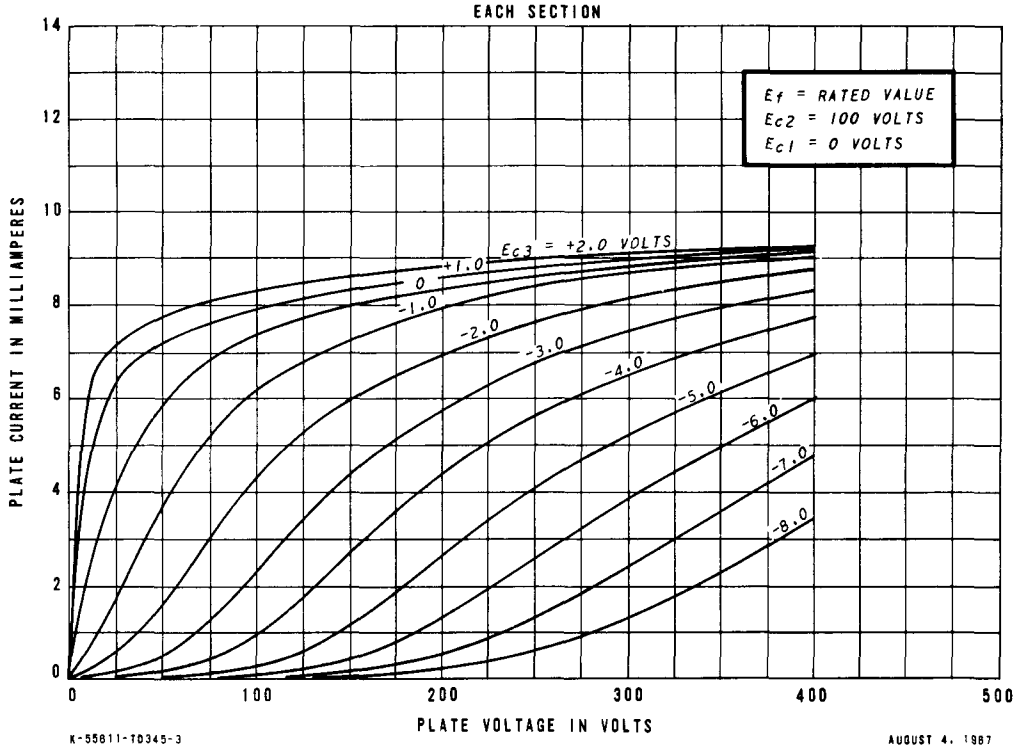
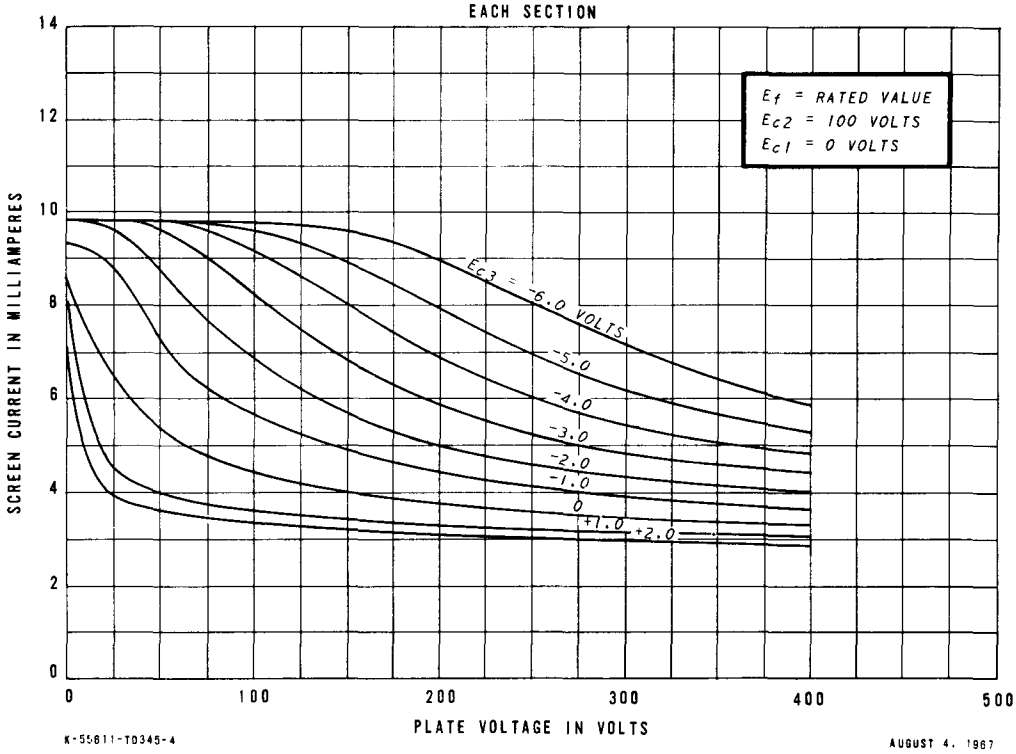


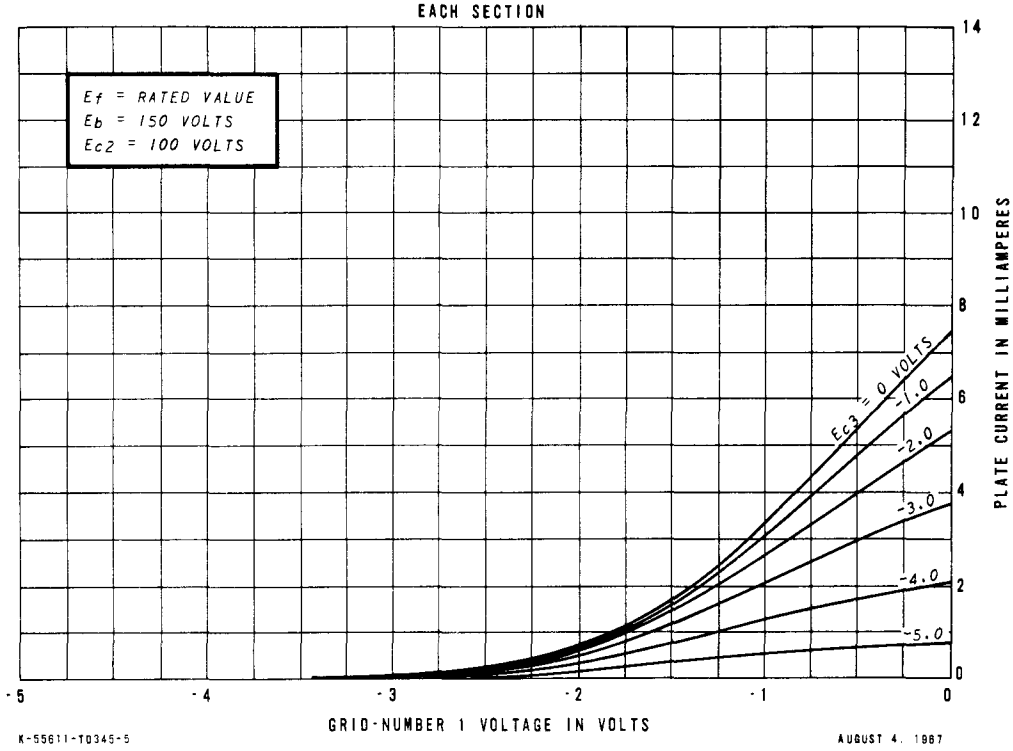
AVERAGE CHARACTERISTICS

EACH SECTION



AVERAGE TRANSFER CHARACTERISTICS

EACH SECTION



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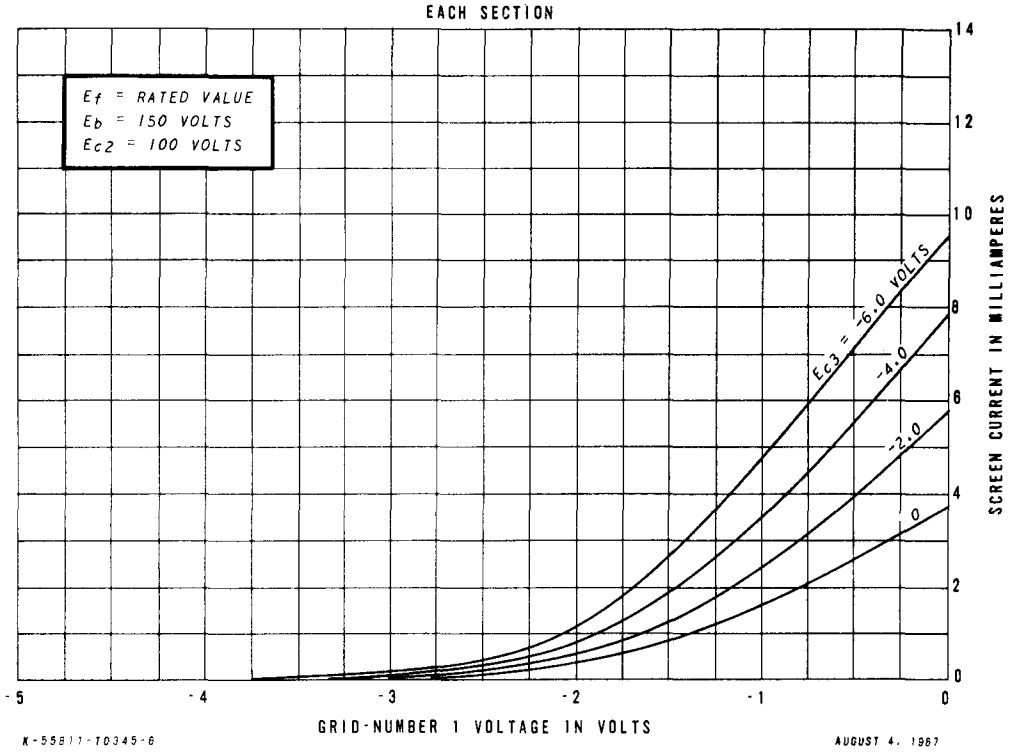

TUBE DEPARTMENT

GENERAL ELECTRIC

Owensboro, Kentucky 42301