



**6BV11**

# Compactron Twin Pentode

**TUBES**

**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

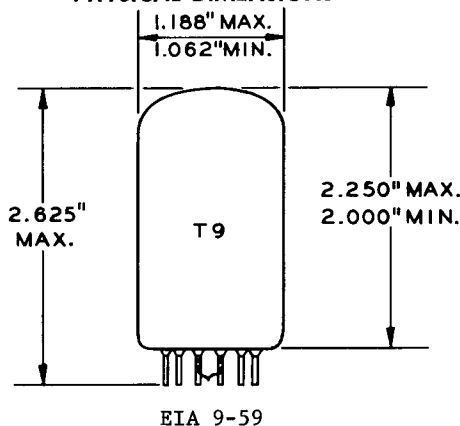
## MAXIMUM RATINGS

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.

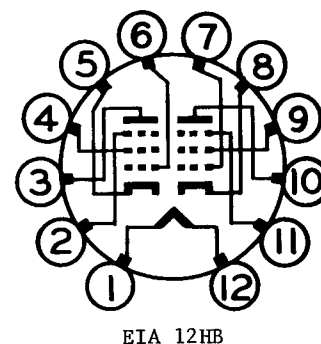
### PHYSICAL DIMENSIONS



### 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



**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**

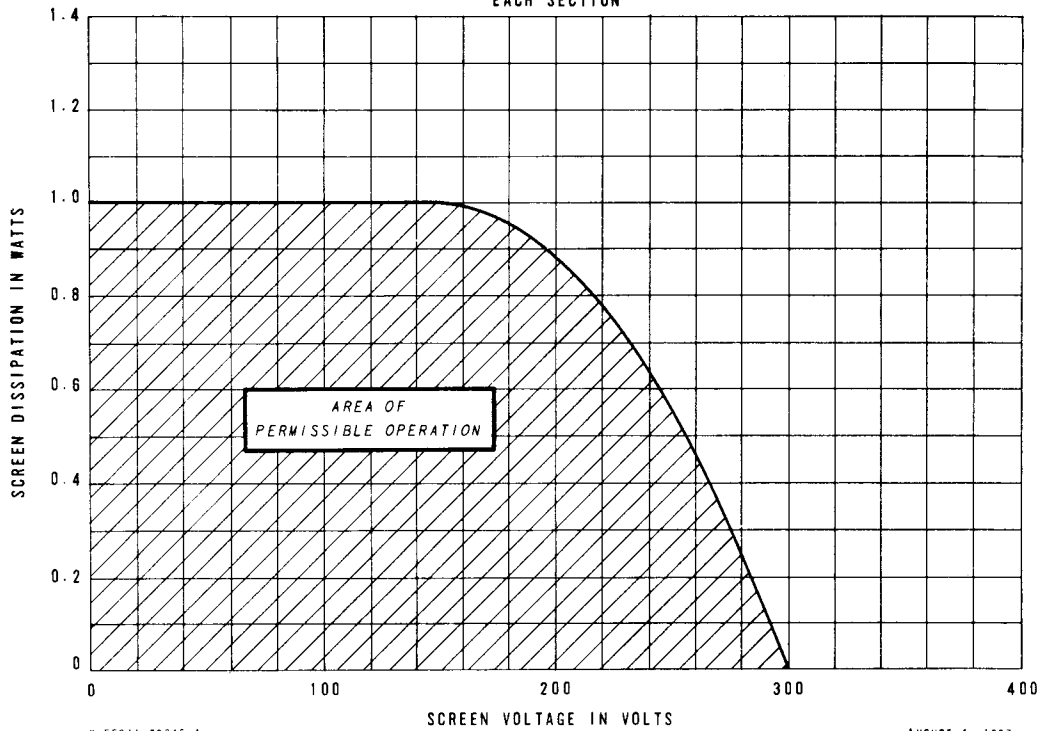
- \* The equipment designer should design the equipment so that heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.
- ‡ Heater current of a bogey tube at Ef = 6.3 volts.
- § Without external shield.

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

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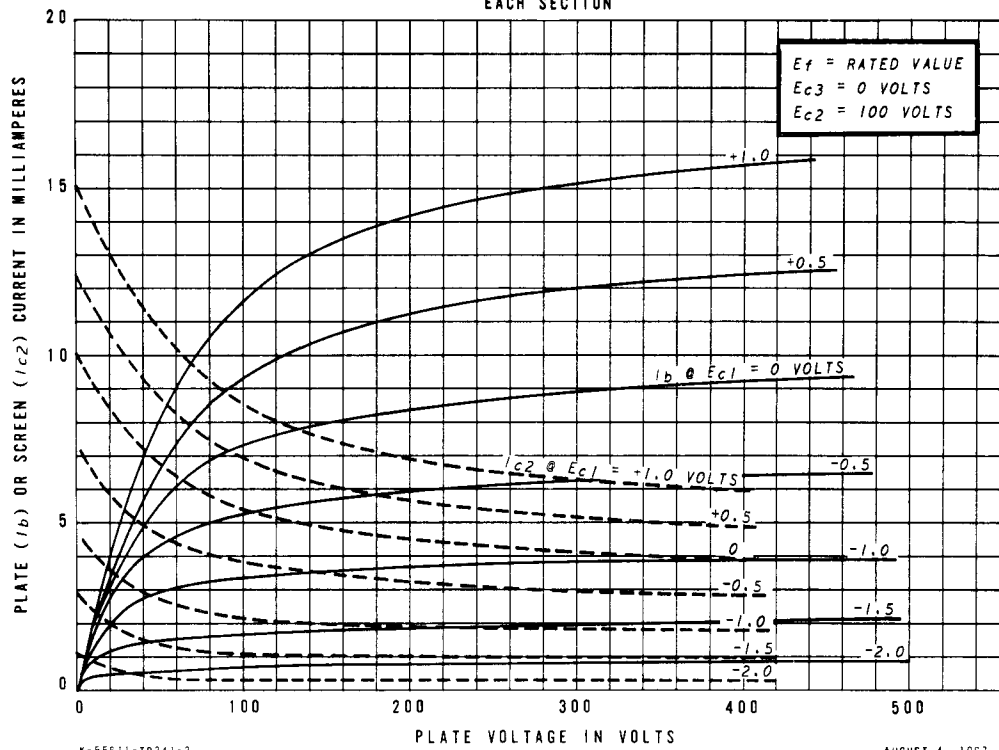
**SCREEN RATING CHART**

EACH SECTION



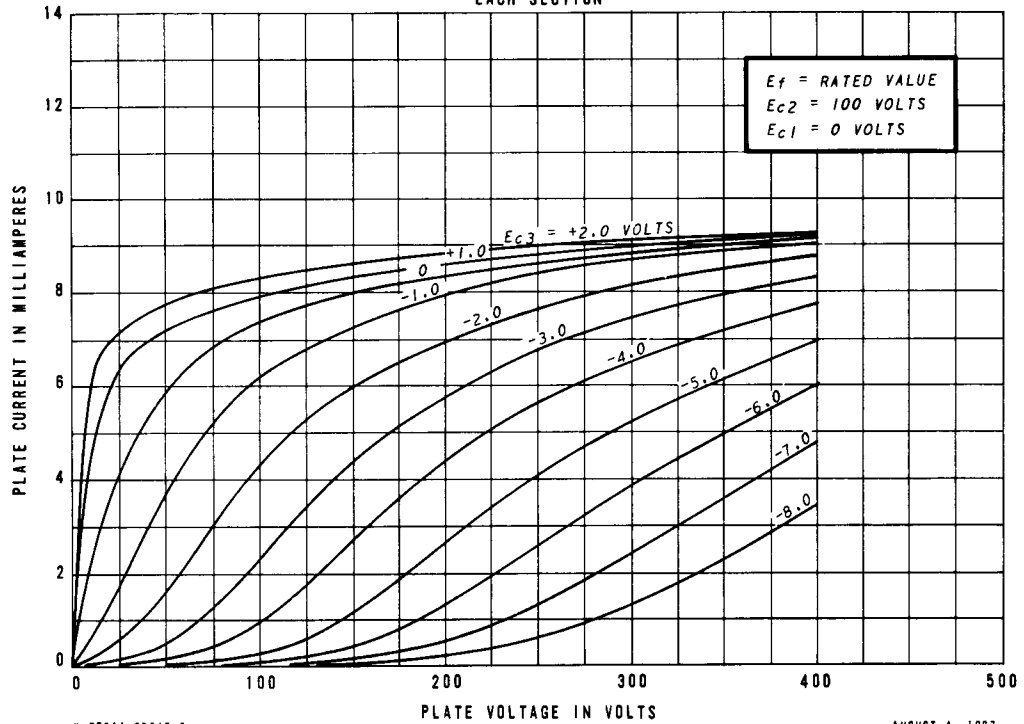
**AVERAGE PLATE CHARACTERISTICS**

EACH SECTION



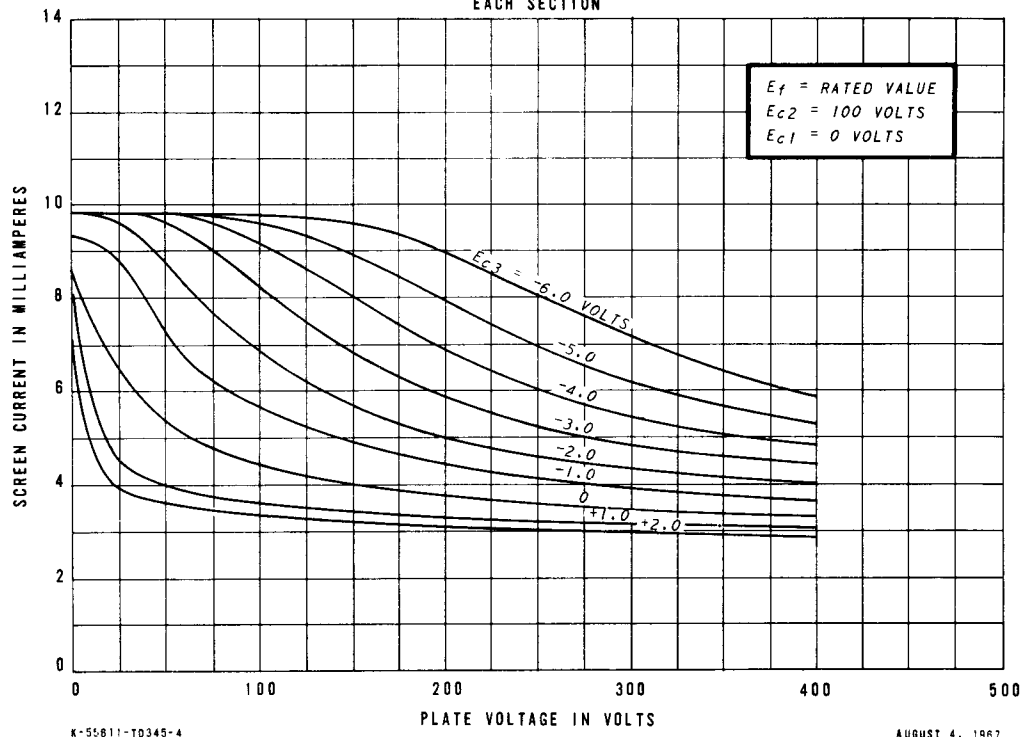
### AVERAGE PLATE CHARACTERISTICS

EACH SECTION



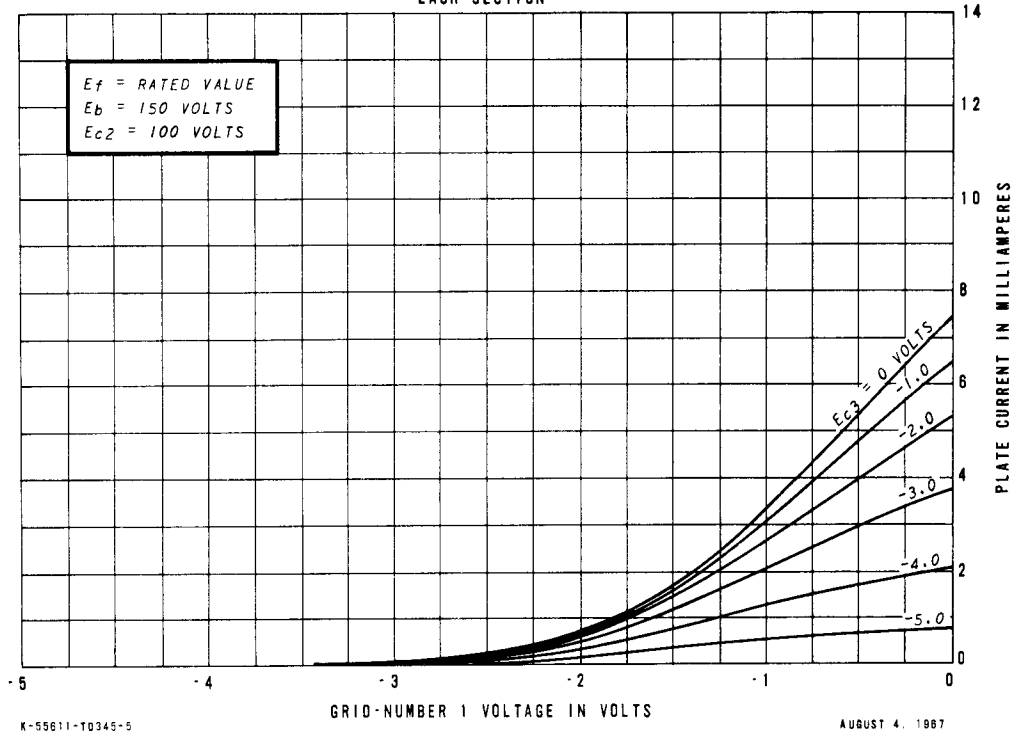
### AVERAGE CHARACTERISTICS

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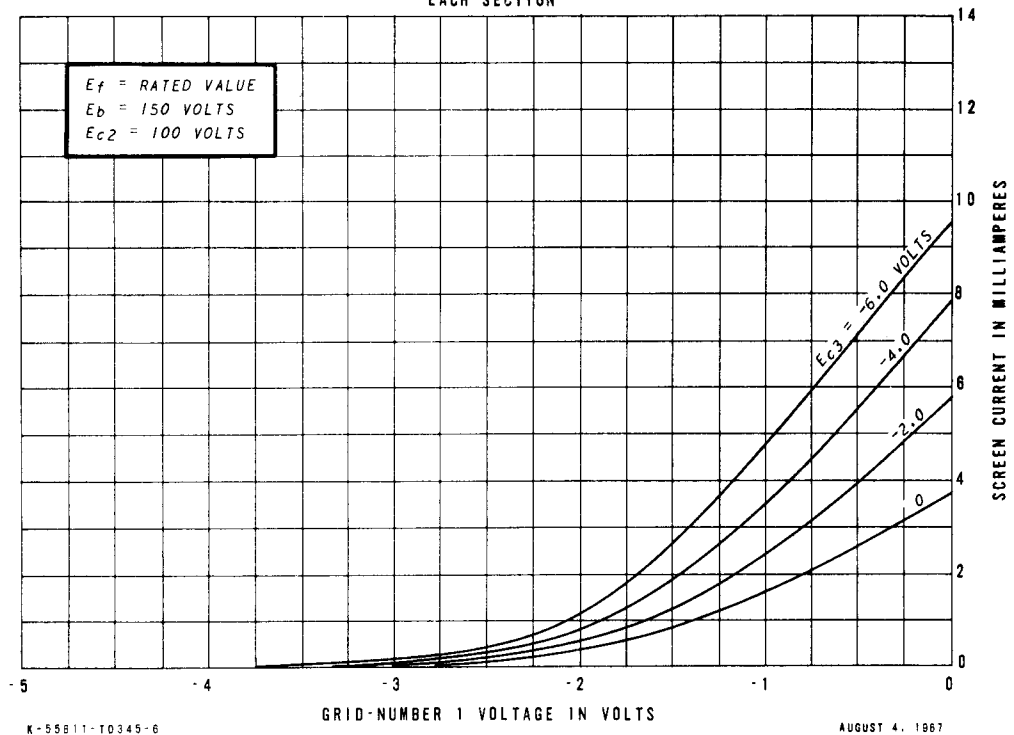
### AVERAGE TRANSFER CHARACTERISTICS

EACH SECTION



### AVERAGE TRANSFER CHARACTERISTICS

EACH SECTION



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**GENERAL**  **ELECTRIC**  
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