

**ELECTRONICS****6JS6-A****COMPACTRON BEAM PENTODE****FOR TV HORIZONTAL-DEFLECTION AMPLIFIER APPLICATIONS****DESCRIPTION AND RATING**

The 6JS6-A is a compactron beam-power pentode primarily designed for use as the horizontal-deflection amplifier in television receivers. A separate connection is provided for the beam plates to minimize "snivets".

The 6JS6-A is unilaterally interchangeable with the 6JS6 and differs in having a lower knee.

GENERAL**ELECTRICAL**

Cathode - Coated Unipotential

Heater Characteristics and Ratings

Heater Voltage, AC or DC* . . . 6.3±0.6 Volts

Heater Current† 2.25 Amperes

Direct Interelectrode Capacitances, approximate‡

Grid-Number 1 to Plate: (g1 to p) 0.7 pf

Input: g1 to (h + k + g2 + b.p.). 24 pf

Output: p to (h + k + g2 + b.p.). 10 pf

MECHANICAL

Operating Position - Any

Envelope - T-12, Glass

Base - E12-74, Button 12-Pin

Top Cap - C1-1, Small

Outline Drawing - EIA 12-89

Maximum Diameter. 1.563 Inches

Maximum Over-all Length . . . 4.125 Inches

Maximum Seated Height 3.750 Inches

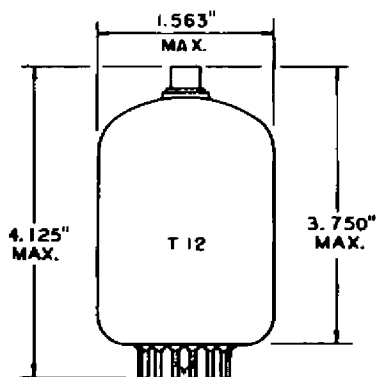
Minimum Seated Height 3.500 Inches

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.

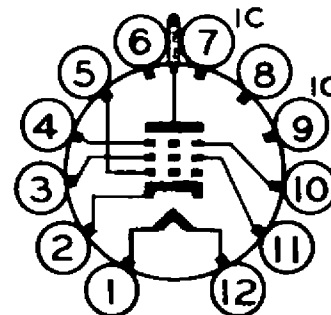
The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of all other electron devices in the equipment.

PHYSICAL DIMENSIONS

EIA 12-89

TERMINAL CONNECTIONS

- Pin 1 - Heater
- Pin 2 - Cathode
- Pin 3 - Grid Number 2 (Screen)
- Pin 4 - Beam Plates
- Pin 5 - Grid Number 1
- Pin 6 - No Connection
- Pin 7 - Internal Connection - Do Not Use
- Pin 8 - No Connection
- Pin 9 - Internal Connection - Do Not Use
- Pin 10 - Beam Plates
- Pin 11 - Grid Number 2 (Screen)
- Pin 12 - Heater
- Cap - Plate

BASING DIAGRAM

EIA 12FY

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.

GENERAL **ELECTRIC**

MAXIMUM RATINGS (Cont'd)

HORIZONTAL-DEFLECTION AMPLIFIER SERVICE†—

DESIGN-MAXIMUM VALUES UNLESS OTHERWISE INDICATED

DC Plate-Supply Voltage (Boost + DC Power Supply)	990	Volts
Peak Positive Pulse Plate Voltage (Absolute Maximum Value)	7500	Volts
Peak Negative Pulse Plate Voltage	1100	Volts
Positive DC Beam Plate Voltage	70	Volts
Screen Voltage	190	Volts
Peak Negative Grid-Number 1 Voltage	250	Volts
Plate Dissipation#	28	Watts
Screen Dissipation	5.5	Watts
DC Cathode Current	315	Milliamperes
Peak Cathode Current	1100	Milliamperes
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	1.0	Megohms
Bulb Temperature Δ	225	C

CHARACTERISTICS AND TYPICAL OPERATION

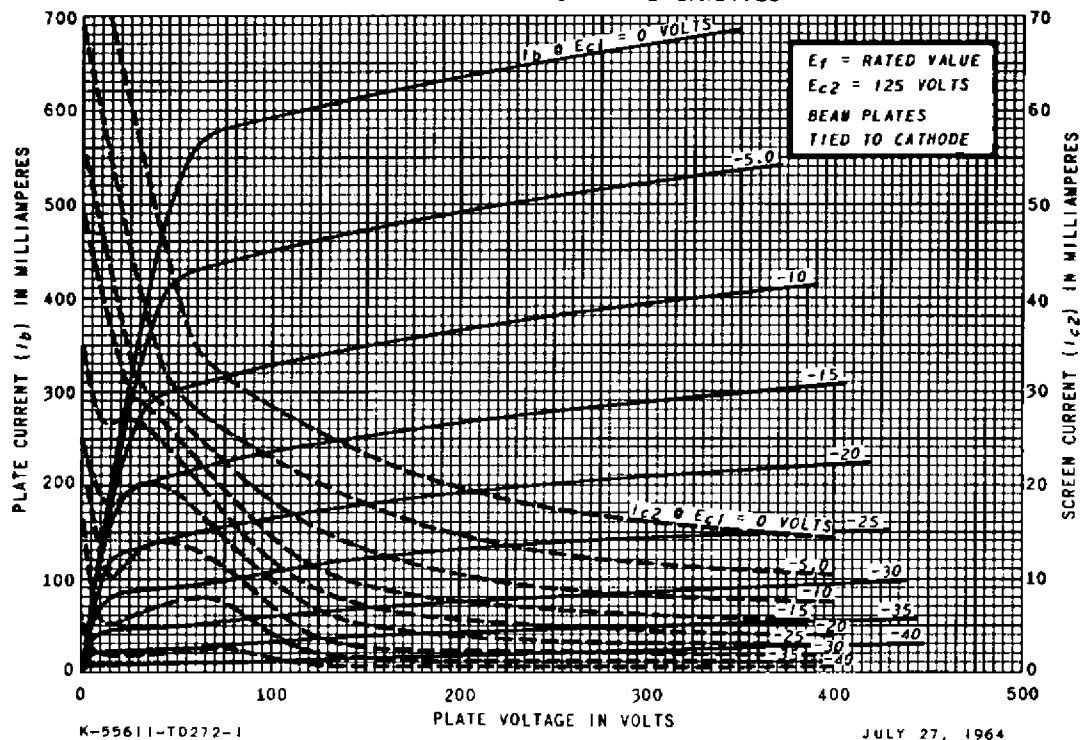
AVERAGE CHARACTERISTICS

Plate Voltage	5000	62	175	Volts
Beam Plates, Connected to Cathode at Socket				
Screen Voltage	125	125	125	Volts
Grid-Number 1 Voltage	---	0	-25	Volts
Plate Resistance, approximate	---	---	5600	Ohms
Transconductance	---	---	11300	Micromhos
Plate Current	---	570**	125	Milliamperes
Screen Current	---	34**	4.5	Milliamperes
Grid-Number 1 Voltage, approximate				
Ib = 1.0 Milliamperes	-140	---	-54	Volts
Triode Amplification Factor**	---	---	3	

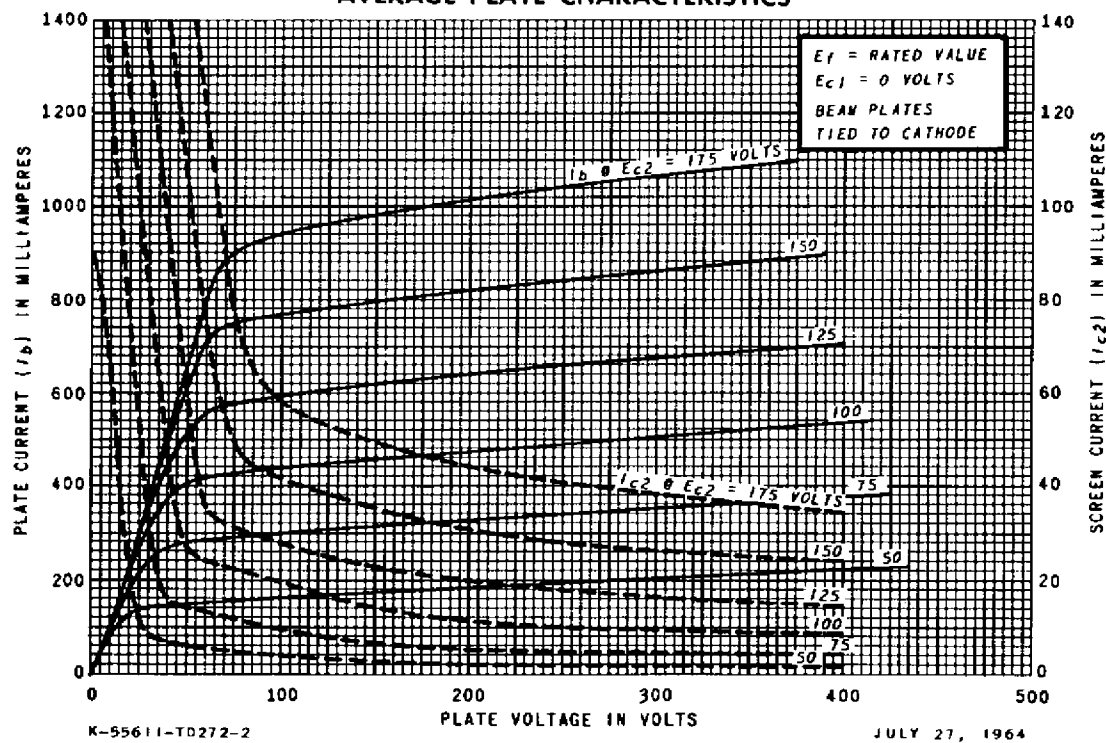
NOTES

- * 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.
- § Without external shield.
- ¶ For operation in a 525-line, 30-frame television system as described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission. The duty cycle of the voltage pulse must not exceed 15 percent of one scanning cycle.
- # In stages operating with grid-leak bias, an adequate cathode-bias resistor or other suitable means is required to protect the tube in the absence of excitation.
- Δ Measured using a thermocouple attached to a 0.1-inch wide phosphor-bronze ring placed at the hottest location on the bulb.
- ** Values measured by a method involving a recurrent waveform such that the plate and screen dissipations will be kept within ratings in order to prevent damage to the tube.
- ** Triode connection (screen tied to plate) with $E_b = E_{c2} = 125$ volts, and $E_{c1} = -25$ volts.

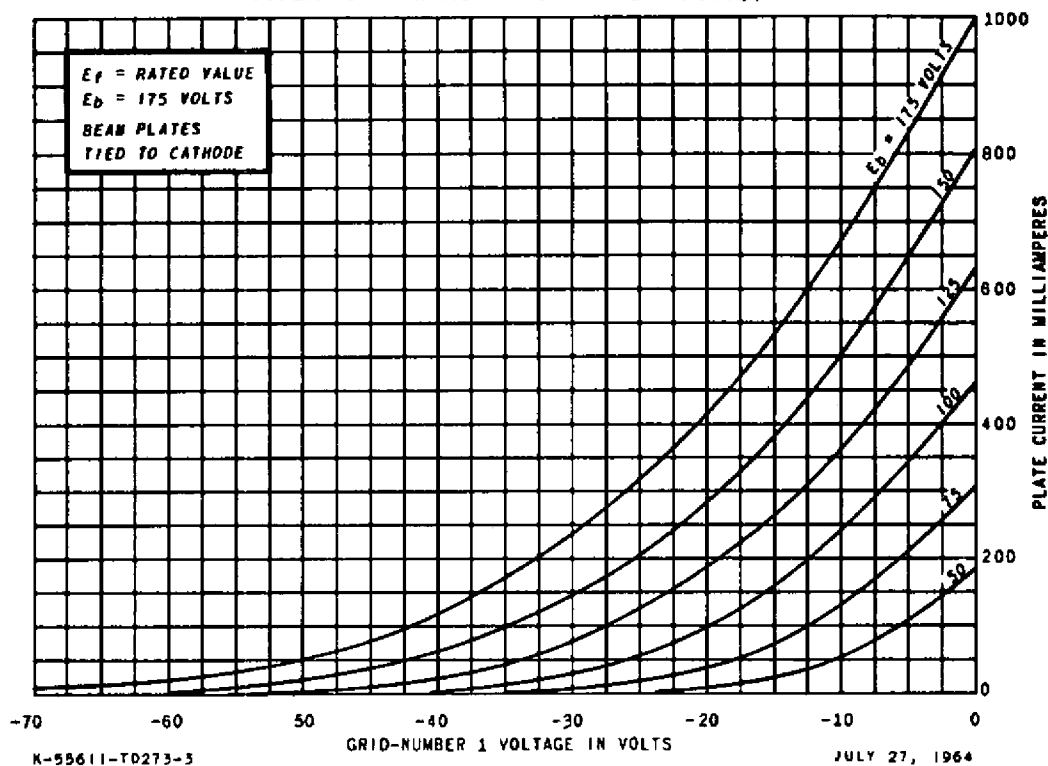
AVERAGE PLATE CHARACTERISTICS



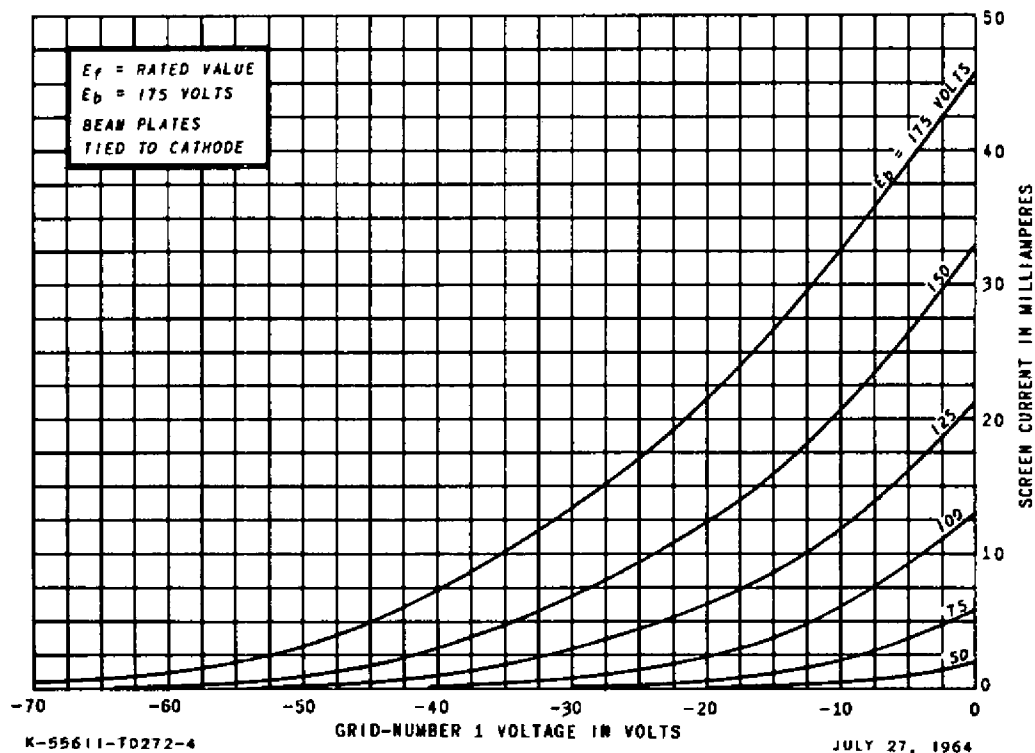
AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



TUBE DEPARTMENT

GENERAL  ELECTRIC

Owensboro, Kentucky