

6HB6 BEAM PENTODE

FOR TV VERTICAL-DEFLECTION AMPLIFIER APPLICATIONS

DESCRIPTION AND RATING

The 6HB6 is a beam pentode designed for use as a vertical-deflection amplifier in television receivers. It is also useful in video amplifier applications.

GENERAL

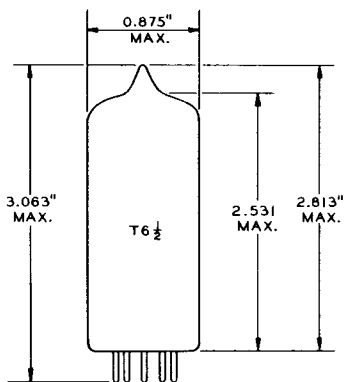
ELECTRICAL	MECHANICAL
Cathode - Coated Unipotential	Operating Position - Any
Heater Characteristics and Ratings	Envelope - T-6 1/2, Glass
Heater Voltage, AC or DC* 6.3±0.6 Volts	Base - E9-1, Small Button 9-Pin
Heater Current†. 0.76 Amperes	Outline Drawing - EIA 6-4
Direct Interelectrode Capacitances‡	Maximum Diameter 0.875 Inches
Grid-Number 1 to Plate: (g1 to p). 0.18 pf	Maximum Over-all Length. 3.063 Inches
Input: g1 to (h + k + g2 + b.p.) . 13 pf	Maximum Seated Height 2.813 Inches
Output: p to (h + k + g2 + b.p.) . 8.0 pf	

MAXIMUM RATINGS

VERTICAL-DEFLECTION AMPLIFIER SERVICE—DESIGN-MAXIMUM VALUES

DC Plate Voltage	350	Volts
Peak Positive Pulse Plate Voltage.	2500	Volts
Screen Voltage	300	Volts
Negative DC Grid-Number 1 Voltage.	100	Volts
Plate Dissipation	10	Watts
Screen Dissipation.	2.0	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.	1.0	Megohms
With Cathode Bias	2.2	Megohms

PHYSICAL DIMENSIONS

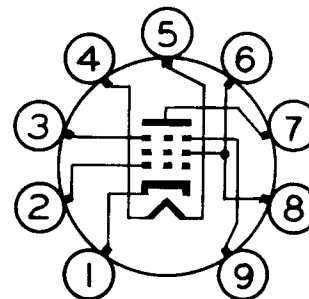


EIA 6-4

TERMINAL CONNECTIONS

- Pin 1 - Cathode
- Pin 2 - Grid Number 1
- Pin 3 - Beam Plates
- Pin 4 - Heater
- Pin 5 - Heater
- Pin 6 - Grid Number 2 (Screen)
- Pin 7 - Plate
- Pin 8 - Grid Number 2 (Screen)
- Pin 9 - Beam Plates

BASING DIAGRAM



EIA 9NW

MAXIMUM RATINGS (Cont'd)

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

Plate Voltage	60	250	250	Volts
Screen Voltage	250	125	250	Volts
Grid-Number 1 Voltage.	0#	---	---	Volts
Cathode-Bias Resistor.	---	33	100	Ohms
Plate Resistance, approximate	---	28000	24000	Ohms
Transconductance	---	24000	20000	Micromhos
Amplification Factor: (g1 to g2).	---	---	33	
Plate Current	150	40	40	Milliamperes
Screen Current	37	4.2	6.2	Milliamperes
Grid-Number 1 Voltage, approximate Ib = 100 Microamperes.	---	-6.4	-13	Volts

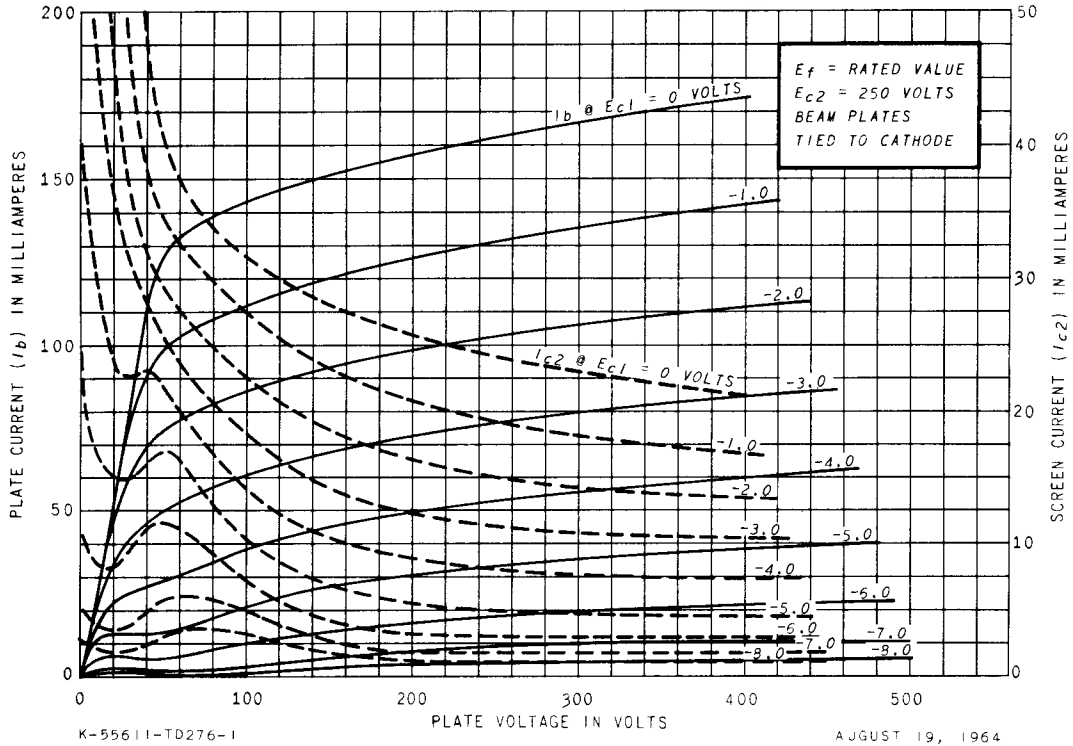
NOTES

- * 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.
- ¶ 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.
- # Applied for short interval (two seconds maximum) so as not to damage tube.

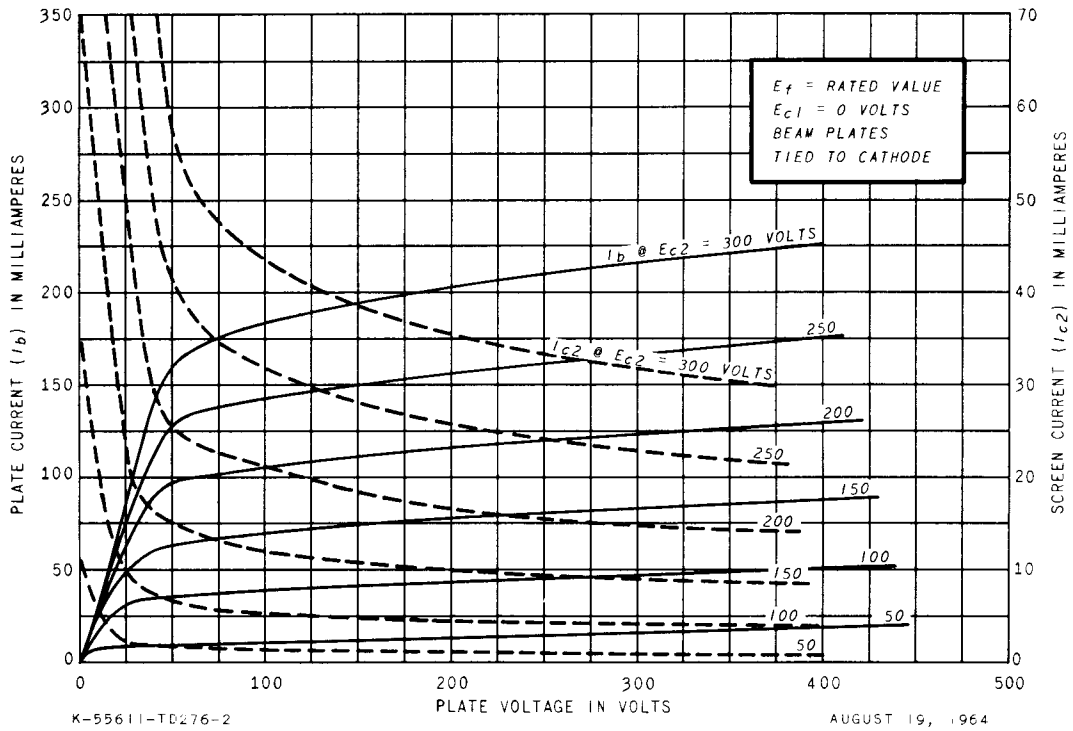
The tubes and arrangements disclosed herein may be covered by patents of General Electric Company or others. Neither the disclosure of any information herein nor the sale of tubes by General Electric Company conveys any license under patent claims covering combinations of tubes with other devices or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

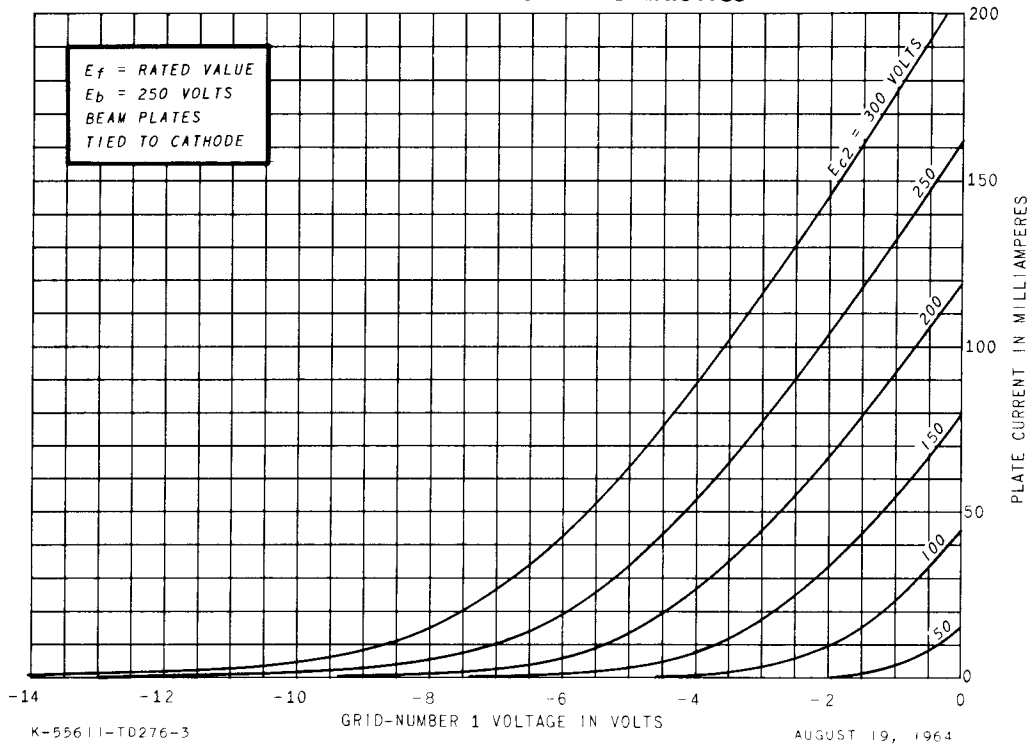
AVERAGE PLATE CHARACTERISTICS



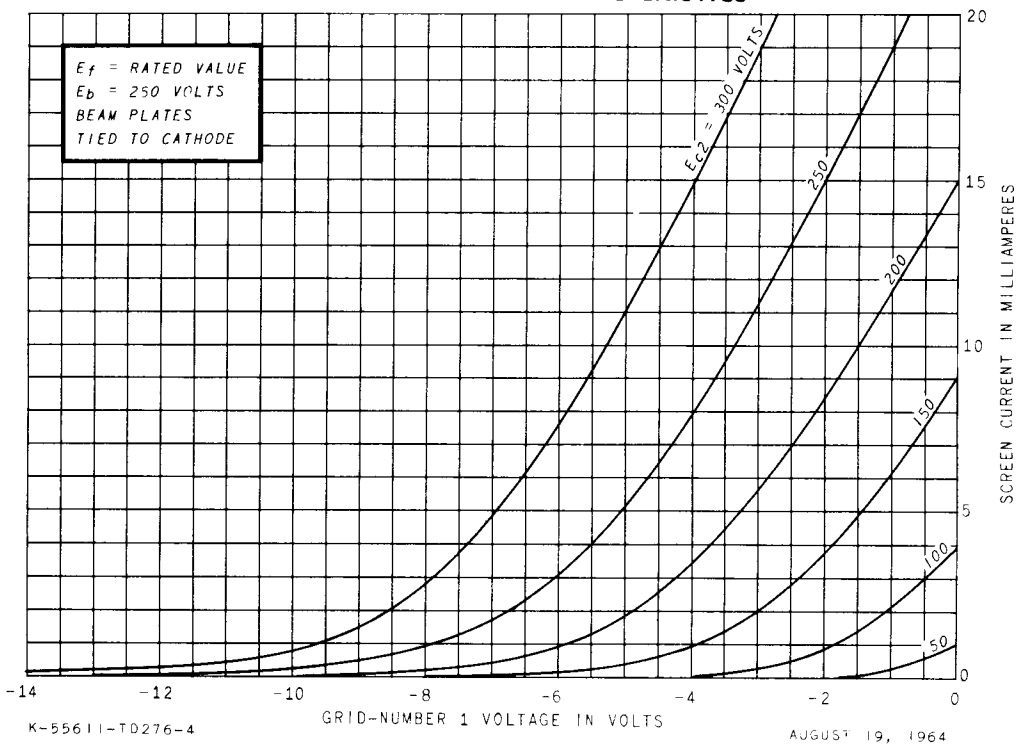
AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS

