

DESCRIPTION AND RATING

FOR TV HIGH-VOLTAGE RECTIFIER APPLICATIONS

The 1B3-GT is a half-wave rectifier designed for use in high-voltage, low-current applications. It is especially suitable for use as the high-voltage rectifier in television receivers to supply power to the anode of television picture tubes.

GENERAL

ELECTRICAL

Cathode—Coated Filament
Filament Characteristics and Ratings
Filament Voltage, AC or DC*... 1.25 ± 0.2 Volts
Filament Current†... 0.2 Amperes
Direct Interelectrode Capacitances, approximate‡
Plate to All: p to (f+i.s.)... 1.3 pf

MECHANICAL

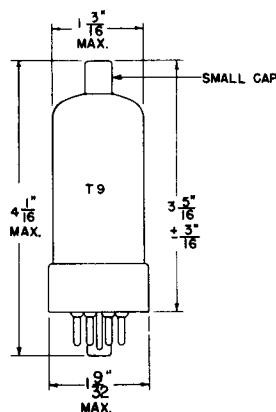
Mounting Position—Any
Envelope—T-9, Glass
Base—B8-6, B6-8, B8-58, B6-60, B5-82, B6-144,
B7-166 or B7-211, Octal 5, 6, 7, or 8-Pin
Top Cap—C1-34, Small
Outline Drawing—EIA 9-51 or 9-52

MAXIMUM RATINGS

DESIGN-MAXIMUM VALUES

	Flyback Rectifier¶	RF Voltage Rectifier	
Peak Inverse Plate Voltage.....		33000	Volts
DC Component.....	22000		Volts
Total DC and Peak.....	26000		Volts
Steady-State Peak Plate Current.....	50	35	Milliamperes
DC Output Current.....	0.5	1.1	Milliamperes
Frequency of Supply Voltage			
Maximum.....		100	Kilocycles
Minimum.....		1.5	Kilocycles

PHYSICAL DIMENSIONS

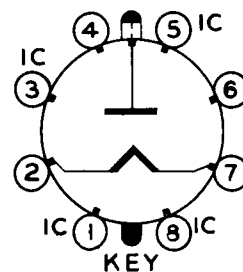


EIA 9-52

TERMINAL CONNECTIONS‡

Pin 1—Internal Connection
Pin 2—Filament
Pin 3—Internal Connection
Pin 4—No Connection
Pin 5—Internal Connection
Pin 6—No Connection
Pin 7—Filament and Internal Shield
Pin 8—Internal Connection
Cap—Plate

BASING DIAGRAM



EIA 3C

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 CHARACTERISTICS

Tube Voltage Drop, approximate $I_b = 7.0$ Milliamperes..... 100 Volts

* The equipment designer should design the equipment so that filament voltage is centered at the specified bogey value, with filament supply variations restricted to maintain filament voltage within the specified tolerance.

† Filament current of a bogey tube at $E_f = 1.25$ volts.

‡ Without external shield.

§ Socket terminals 1, 3, 4, 5, 6, and 8 may be connected to terminal 7 or to a corona shield which connects to terminal 7. Terminals 4 and 6 may be used as tie points for components at or near filament potential.

¶ 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.

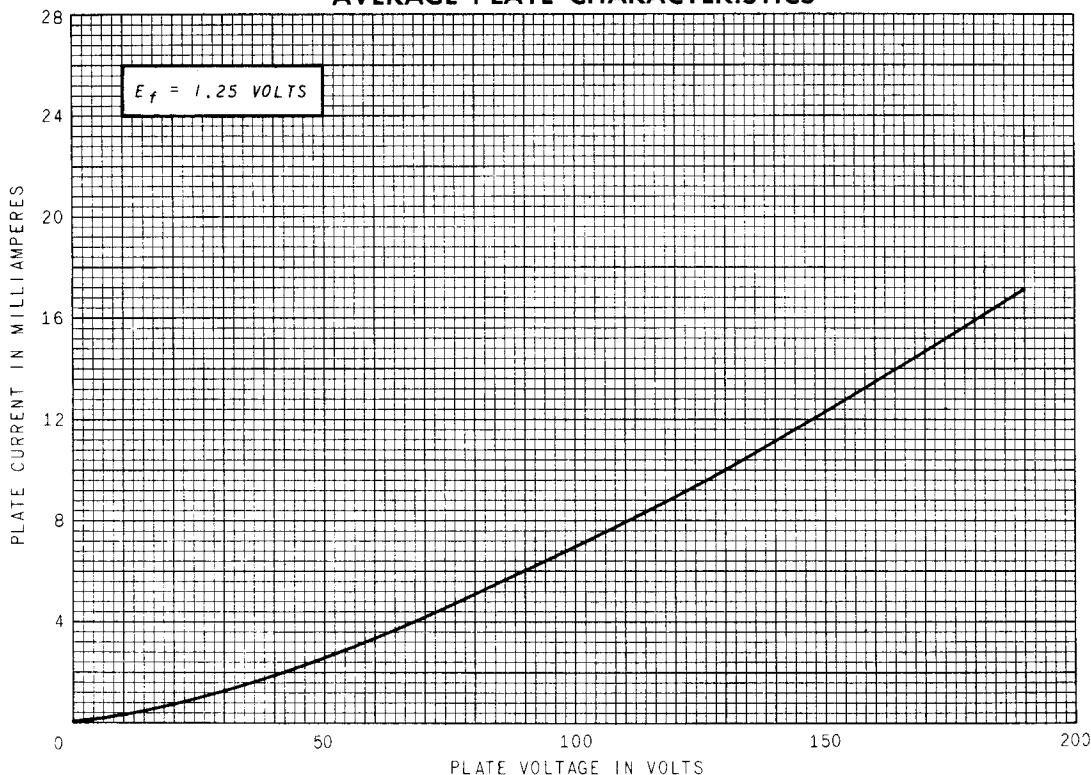
Note: The voltages employed in some television receivers and other high-voltage equipment are sufficiently high that high-voltage rectifier tubes may produce soft x-rays which can constitute a health hazard unless such tubes are adequately shielded. The need for this precaution should be considered in equipment design. Relatively simple shielding should prove adequate.

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.

AVERAGE PLATE CHARACTERISTICS



RECEIVING TUBE DEPARTMENT

GENERAL  ELECTRIC

Owensboro, Kentucky