

DESCRIPTION AND RATING

FOR TV HIGH-VOLTAGE RECTIFIER APPLICATIONS

The 1K3 is a filamentary diode designed for use in television receivers as the high-voltage rectifier to supply power to the anode of the television picture tube. It is primarily intended for use in flyback types of power supplies. The 1K3 is a direct replacement for the 1J3.

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 Filament (p to f) 1.6 pf

MECHANICAL

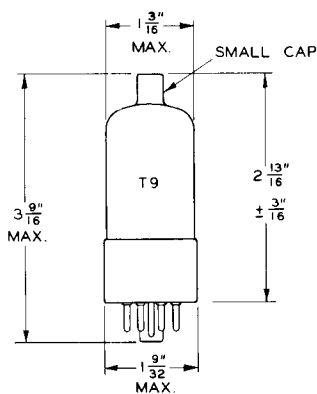
Mounting Position—Any
 Envelope—T-9, Glass
 Base—B6-8, Intermediate Shell Octal 6-Pin
 or B6-60, Short Intermediate Shell Octal 6-Pin
 Top Cap—C1-34, Small

MAXIMUM RATINGS

FLYBACK RECTIFIER SERVICE §—DESIGN-MAXIMUM VALUES

Peak Inverse Plate Voltage	Steady-State Peak Plate Current 50	Milliamperes
DC Component 22000	Volts	
Total DC and Peak 26000	Volts	
	DC Output Current 0.5	Milliamperes

PHYSICAL DIMENSIONS



EIA 9-53

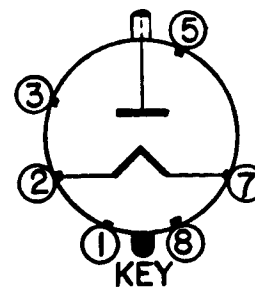
TERMINAL CONNECTIONS ‡

- 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

‡ 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.

§ Pins 4 and 6 omitted on Base Numbers B6-8 and B6-60.

BASING DIAGRAM



KEY

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 DC..... 225 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.
- § For operation in a 525-line, 30-frame television system as described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communi-

cations Commission. The duty cycle of the voltage pulse must not exceed 15 percent of one scanning cycle.

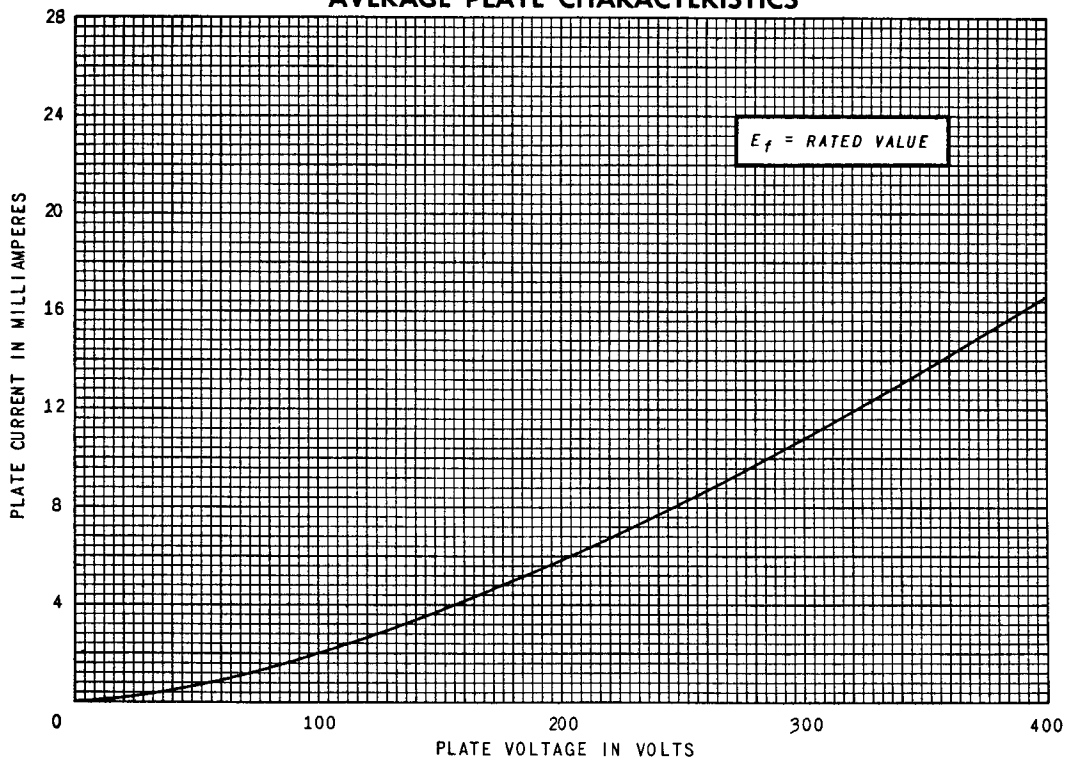
Note: The voltages employed in some television receivers and other high-voltage equipment are sufficiently high that high-voltage rectifier tubes may produce soft x-rays which can constitute a health hazard unless such tubes are adequately shielded. The need for this precaution should be considered in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



Owensboro, Kentucky