**1J3 DIODE**

**FOR TV HIGH-VOLTAGE RECTIFIER APPLICATIONS**

**DESCRIPTION AND RATING**

The 1J3 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. The 1J3 is primarily intended for use in flyback types of power supplies.

**GENERAL**

**ELECTRICAL**
- Cathode—Coated Filament
- Filament Voltage, AC or DC .................................. 1.25* Volts
- Filament Current ............................................. 0.2 Amperes
- Direct Interelectrode Capacitances, approximate †
  - Plate to Filament ........................................... 1.6 \( \mu \text{f} \)

**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
  - DC Component ............................................. 22000 Volts
  - Total DC and Peak ..................................... 26000 Volts
- Steady-State Peak Plate Current .......................... 0.5 Milliamperes
- DC Output Current ........................................... 0.5 Milliamperes

Design-Maximum Ratings are the limiting values expressed with respect to bogie tubes at which satisfactory tube life can be expected to occur for the types of service for which the tube is rated. Therefore, the equipment designer must establish the circuit design so that initially and throughout equipment life no design-maximum value is exceeded with a bogie tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, and environmental conditions.

**BASING DIAGRAM**

**TERMINAL CONNECTIONS**

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

† May be used as tie point at filament potential. Do not connect to any other circuits.

**PHYSICAL DIMENSIONS**
AVERAGE CHARACTERISTICS

Tube Voltage Drop, approximate

\[ I_b = 7.0 \text{ Milliamperes DC} \]

\[ 225 \text{ Volts} \]

* Under no circumstances should the filament voltage be less than 1.05 volts or more than 1.45 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.

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.

AVERAGE PLATE CHARACTERISTICS

\[ E_f = \text{RATED VALUE} \]

PLATE CURRENT IN MILLIAMPERES

PLATE VOLTAGE IN VOLTS

ELECTRONIC COMPONENTS DIVISION

GENERAL ELECTRIC

Schenectady 5, N. Y.