Electronic TUBES

# 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 | μμf |

#### 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

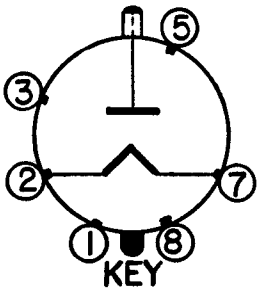
### MAXIMUM RATINGS

#### 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 | 50 | 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



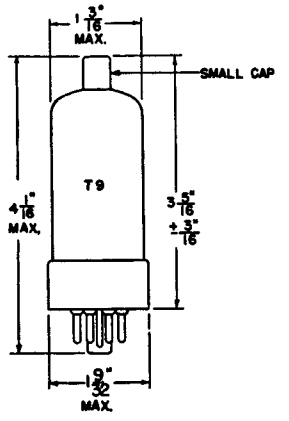

RETMA 3C

### 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




GENERAL ELECTRIC

## AVERAGE CHARACTERISTICS

Tube Voltage Drop, approximate
Ib = 7.0 Milliamperes DC . . . . . 225 Volts

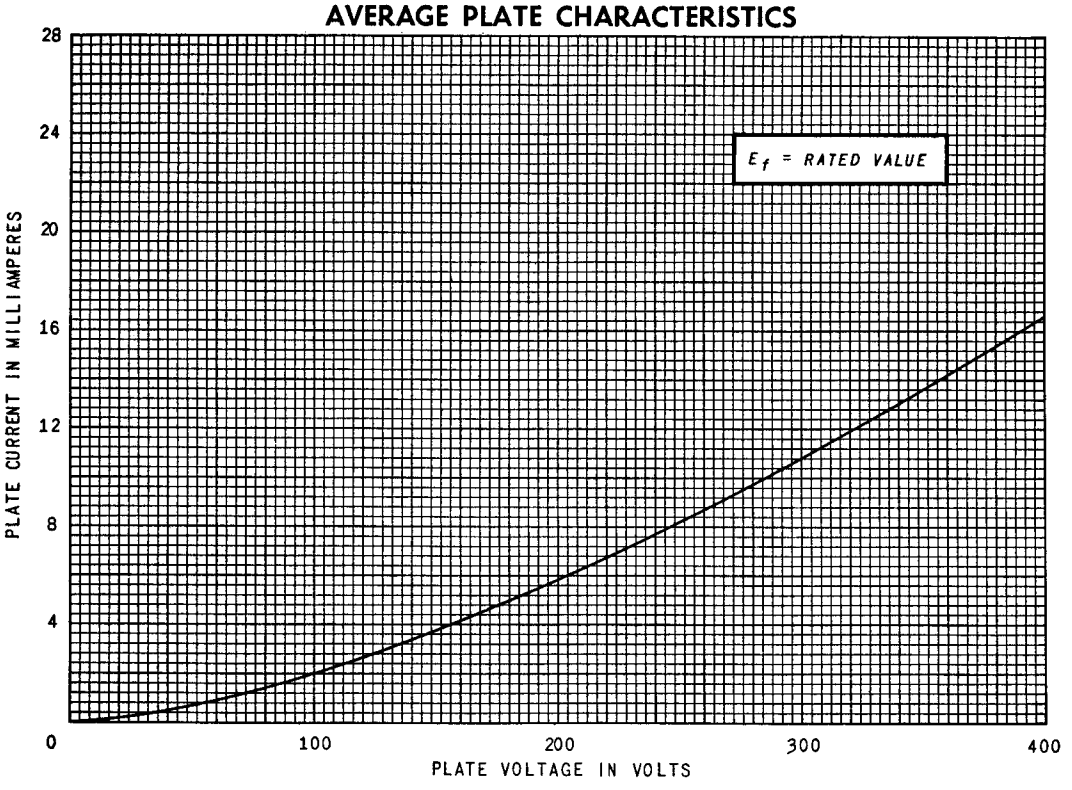
* Under no circumstances should the filament voltage be less than 1.05 volts or more than 1.45 volts.

† 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

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