



2B3

2B3
ETT-975
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DIODE

FOR TV HIGH-VOLTAGE RECTIFIER APPLICATIONS

DESCRIPTION AND RATING

The 2B3 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 intended primarily for use in flyback types of power supplies. Primarily, the 2B3 differs from the 1B3-GT by incorporating higher filament ratings which in many cases will permit the tube to be operated directly from the flyback transformer without the use of a filament dropping resistor.

GENERAL

ELECTRICAL

Cathode—Coated Filament	
Filament Voltage, AC or DC	1.75* Volts
Filament Current	0.25 Amperes
Direct Interelectrode Capacitances, approximate†	
Plate to Filament	1.3 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

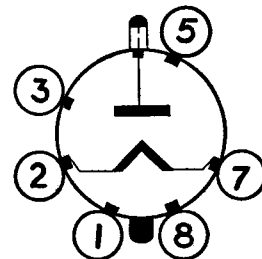
FLYBACK RECTIFIER SERVICE§

DESIGN-MAXIMUM VALUES

Peak Inverse Plate Voltage	
DC Component	22000 Volts
Total DC and Peak	27000 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. In order to obtain satisfactory circuit performance, therefore, the equipment designer must establish the circuit design so that no design-maximum value is exceeded with a bogie tube under the worst probable operating conditions with respect to the combined effect of supply-voltage variation, equipment component variation, equipment control adjustment, load variation, and any other variation associated with the equipment or the environment of the equipment.

BASING DIAGRAM



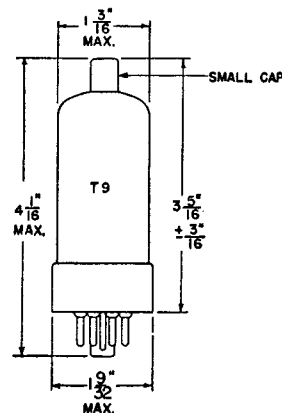
KEY

RETMA 8HC

TERMINAL CONNECTIONS

- Pin 1—Internal Connection—Do Not Use
 - Pin 2—Filament
 - Pin 3—No Connection‡
 - Pin 5—No Connection‡
 - Pin 7—Filament and Internal Shield
 - Pin 8—Internal Connection—Do Not Use
 - 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
 $I_b = 7.0$ Milliamperes DC 100 Volts

- * Under no circumstances should the filament voltage be less than 1.5 volts or more than 2.0 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

