June 25, 1956

DIODE FOR T.V. DAMPING DIODE APPLICATIONS

Type 12B3 is an indirectly heated half-wave rectifier in a miniature envelope, intended for service as the damping diode in the horizontal deflection circuit of television receivers. It is capable of withstanding high pulse voltages between the heater and the cathode and high inverse pulse voltages between the plate and the cathode

The 6B3 is similar to the 12B3 except the heater data.

GENERAL DATA

Electrical

Heater for unipotential cathode

Voltage	6.3 AC or DC volts
Current	1.2 amp.

Direct interelectrode capacitance, approximately (without external shield.)

Heater to cathode	2.7 μμf
Plate to cathode and heater	5.3 μμf

Mechanical:

Mounting position	Any
Maximum overall length	3 inches
Maximum seated length	2¾ inches
Maximum diameter	⅞ inches
Bulb	T6½
Cap	Skirted Miniature (JETEC No. C1-2 or C1-33)
Base	Small Button Novel 9 pin (JETEC No. E9-1)

DAMPER SERVICE ①

Maximum Ratings (Design center values unless otherwise indicated)

Peak Inverse Plate Voltage	4400 ② volts
Steady State Peak Plate Current	750 mA
Maximum Transient Peak Plate Current	3.0 amp.
Maximum D.C. Plate Current	150 mA
Heater-Cathode Voltage	
Heater Positive with Respect to Cathode	
D.C. Component	100 volts
Total D.C. and Peak	300 volts
Heater Negative with Respect to Cathode	
D.C. Component	900 volts
Total D.C. and Peak	4400 volts

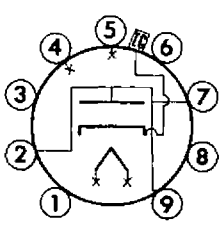
Average Characteristics:

Tube Voltage drop	
I_b=250MA	32 volts

TERMINAL CONNECTIONS

Pin 1 – No connection
Pin 2 – Plate
Pin 3 – No connection
Pin 4 – Heater
Pin 5 – Heater
Pin 6 – No connection
Pin 7 – Plate
Pin 8 – No connection
Pin 9 – Plate
T.C. – Cathode

BASING DIAGRAM



9BD

NOTES

① 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.

② Value given is to be considered as an Absolute Maximum Rating. In this case, the combined effect of supply voltage variation, manufacturing variation including components in the equipment, and adjustment of equipment controls should not cause the rated value to be exceeded.

from JETEC release #1718, Aug. 27, 1956

AVERAGE PLATE CHARACTERISTICS