MINIATURE TEMPERATURE LIMITED DIODE

DESCRIPTION

This temperature limited diode is designed for use in voltage regulator applications or for use in circuits requiring a tube with temperature limited emission characteristics. Temperature limited operation of the tube causes anode current to become a direct function of filament voltage, and thus small changes in applied filament voltage will produce relatively large changes in anode current. The use of a pure tungsten filament permits continuous use of the tube in the temperature limited region without change or damage to the filament during the life of the tube. The tube includes a fail safe device which causes a heater to anode short should the heater open.

PHYSICAL CHARACTERISTICS

Base .................................................. E7-1 (7 Pin miniature)
Bulb .................................................. T-5½
Outline .............................................. 5-2
Max. overall length ................................ 2½ in.
Max. diameter ..................................... ¾ in.
Mounting position
Vertical .............................................. Base up or down
Horizontal ......................................... Pins 3 and 4 in a vertical plane

RATINGS

Anode Voltage ........................................ 250 Vdc
Anode Current \(^{(1)}\) .................................. 50 uA dc
Filament Voltage \(^{(2)}\) ............................... 3Vac or dc
Filament Current .................................... 365 mA ac or dc
Anode Load Resistor ................................. 1 megohm

MAXIMUM RATINGS \(^{(3)}\)

The ratings given above should be closely followed when the tube is used in circuits where stable operating characteristics and long service life are of prime importance. However, the ratings can be increased to the absolute limits specified below with a corresponding reduction in stability of operating characteristics and decrease in service life. (Refer to graphs on the reverse side of this sheet.)

Anode Voltage ........................................ 300 Vdc
Anode Current \(^{(1)}\) .................................. 2.0 mA dc
Filament Voltage \(^{(2)}\) ............................... 5 Vac or dc

NOTES:
1. Plates connected together at socket.
2. Filaments connected in series.
3. Maximum on time with a 50% duty cycle is 5 minutes.
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NORMAL LIFE EXPECTANCY VS APPLIED FILAMENT VOLTAGE

AVERAGE EMISSION CHARACTERISTICS

NOTES:
1. MEASURED AT 7/16 DIA. ON BULB.
2. TO FIT J.A.N-S-28 MINIATURE 7 PIN SOCKET.
3. NUMBERS INDICATE PIN LOCATIONS IN ACCORDANCE WITH RTMA STANDARDS AND ARE FOR REFERENCE ONLY.