

Electronic Tubes

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25DK4

DIODE

FOR HALF-WAVE POWER RECTIFIER APPLICATIONS

The 25DK4 is a miniature half-wave rectifier designed for use in line-operated equipment having series-connected, 150-milliampere heaters. The heater is tapped to allow a portion of it to be used as a current-limiting resistor.

GENERAL

Electrical

Cathode - Coated Unipotential

Heater Characteristics and Ratings (Design-Maximum Rating System)

Heater Voltage, AC or DC*

Between Pins 3 and 4

25 Volts

Between Pins 3 and 6

22.25 Volts

Heater Current+

0.15±0.01 Amperes

Mechanical

Mounting Position - Any

Envelope - T-5 1/2, Glass

Base E7-1, Miniature Button 7-Pin

Outline Drawing - EIA 5-3

Maximum Diameter

3/4 Inches

Maximum Over-all Length

2 5/8 Inches

Maximum Seated Height

2 3/8 Inches

TERMINAL CONNECTIONS

Pin 1 - No Connection

Pin 2 - No Connection

Pin 3 - Heater

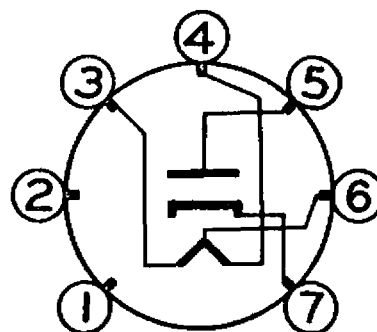
Pin 4 - Heater

Pin 5 - Plate

Pin 6 - Heater Tap

Pin 7 - Cathode

BASING DIAGRAM



EIA 5BQ

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MAXIMUM RATINGS

Rectifier Service - Design-Maximum Values

Peak Inverse Plate Voltage	330	Volts
Steady-State Peak Plate Current	600	Milliamperes
DC Output Current	100	Milliamperes
Heater-Cathode Voltage		
Heater Positive with Respect to Cathode	330	Volts
Heater Negative with Respect to Cathode	330	Volts

Design-maximum ratings are limiting values of operating and environmental conditions applicable to a bogey tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions. The tube manufacturer chooses these values to provide acceptable serviceability of the tube, taking responsibility for the effects of changes in operating conditions due to variations in characteristics of the tube under consideration.

The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey tube under the worst probable operating conditions with respect to supply voltage variation, equipment component variation, variation in characteristics of all other tubes in the equipment, equipment control adjustment, load variation, signal variation, and environmental conditions.

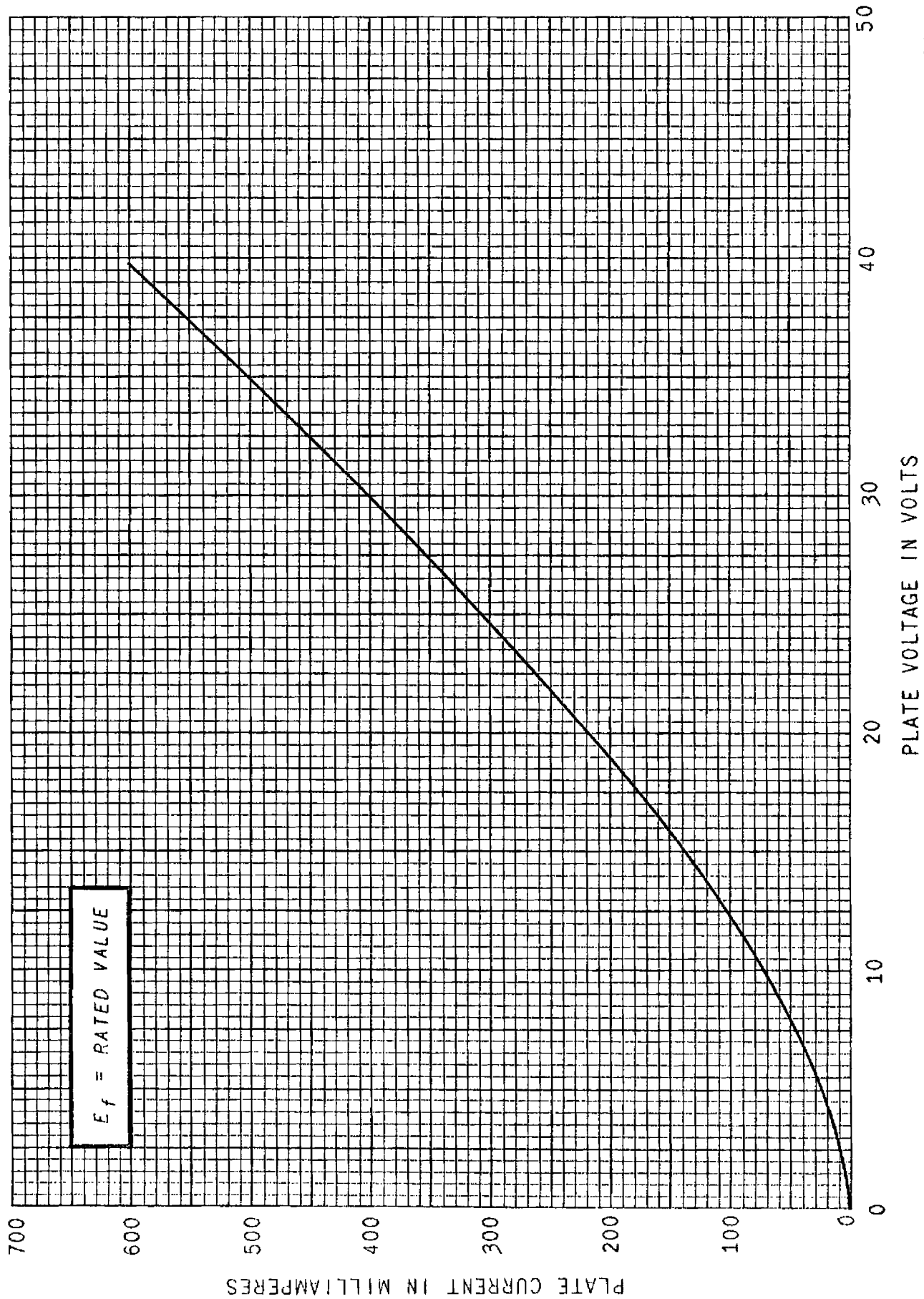
CHARACTERISTICS AND TYPICAL OPERATION

Half-Wave Rectifier with Capacitor-Input Filter

AC Plate-Supply Voltage, RMS	117	Volts
Filter Input Capacitor	40	Microfarads
Total Plate-Supply Resistance†		
DC Output Current	90	Milliamperes
DC Output Voltage at Filter Input	113	Volts
Tube Voltage Drop		
Ib = 200 Milliamperes DC	19	Volts

- * Heater voltage at bogey heater current. The heater tap is provided to allow a portion of the heater to be used as a current-limiting resistor (see schematic). It is not intended for panel-lamp operation.
- + For series heater operation, the equipment designer shall design the equipment so that heater current is centered at the specified bogey value, with heater supply variations restricted to maintain heater current within the specified tolerance.
- † The portion of the heater between pins 4 and 6 has an approximate resistance of 19 ohms when the output current of the rectifier is 100 milliamperes.

AVERAGE PLATE CHARACTERISTICS



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