

**FOR TV DAMPING DIODE APPLICATIONS**

**DESCRIPTION AND RATING**

The 17H3 is a miniature heater-cathode type diode intended for service as the damping diode in the horizontal-deflection circuit of compact, 300-milliampere series-string television receivers. The tube features relatively small size and low power requirements. It also has a controlled heater warm-up characteristic as required for use in television receivers that employ series-connected heaters.

**GENERAL**

**ELECTRICAL**

Cathode—Coated Unipotential	
Heater Voltage, AC or DC.....	17.5 Volts
Heater Current.....	0.3 $\pm$ 6% Amperes
Heater Warm-up Time*.....	11 Seconds
Direct Interelectrode Capacitances, approximate†	
Cathode to Plate and Heater.....	5.5 $\mu$ f
Plate to Cathode and Heater.....	4.0 $\mu$ f
Heater to Cathode.....	2.0 $\mu$ f

**MECHANICAL**

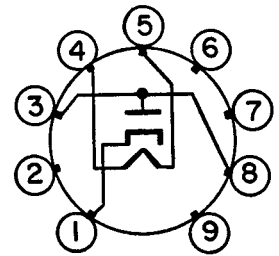
Mounting Position—Any  
Envelope—T-6 1/2, Glass  
Base—E9-1, Small Button 9-Pin

**TV DAMPER SERVICE‡—DESIGN-MAXIMUM VALUES**

Peak Inverse Plate Voltage.....	2000 Volts
Plate Dissipation.....	3.0 Watts
Steady-State Peak Plate Current.....	450 Milliamperes
DC Output Current.....	75 Milliamperes
Heater-Cathode Voltage	
Heater Positive with Respect to Cathode	
DC Component.....	100 Volts
Total DC and Peak.....	200 Volts
Heater Negative with Respect to Cathode	
DC Component.....	500 Volts
Total DC and Peak.....	2000 Volts

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**

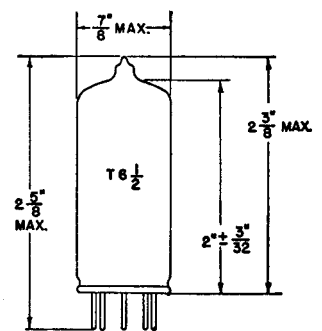


RETMA 9FK

**TERMINAL CONNECTIONS**

- Pin 1—Cathode
- Pin 2—No Connection—Do Not Use
- Pin 3—Plate
- Pin 4—Heater
- Pin 5—Heater
- Pin 6—No Connection—Do Not Use
- Pin 7—No Connection—Do Not Use
- Pin 8—Plate
- Pin 9—No Connection—Do Not Use

**PHYSICAL DIMENSIONS**



RETMA 6-3

**AVERAGE CHARACTERISTICS**

**Tube Voltage Drop**

$I_b = 140$  Milliamperes DC. . . . . 22 Volts

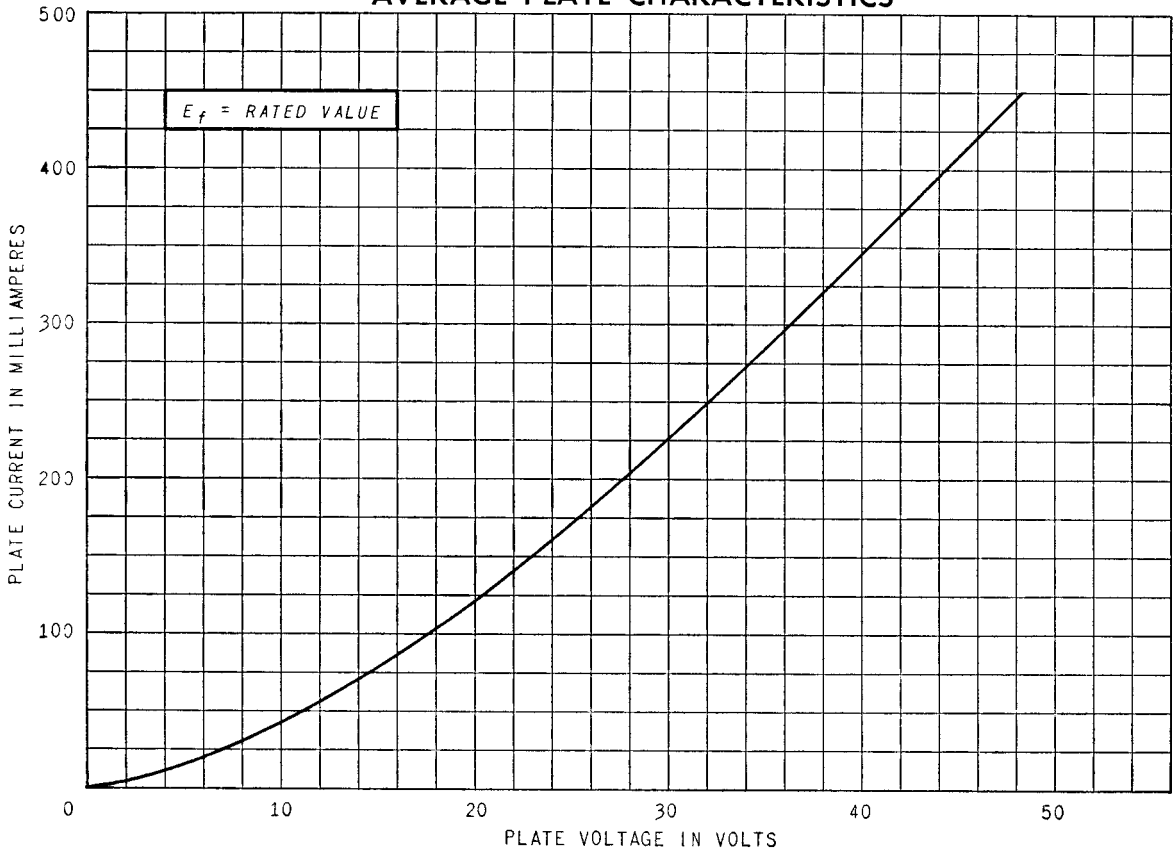
\* The time required for the voltage across the heater to reach 80 percent of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times the rated heater voltage divided by the rated heater current.

† 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:** Operation of this tube as a power rectifier is not recommended.

**AVERAGE PLATE CHARACTERISTICS**



**TUBE DEPARTMENT**



Schenectady 5, N. Y.