



**TWIN DIODE**  
**FOR FULL-WAVE POWER RECTIFIER APPLICATIONS**

**DESCRIPTION AND RATING**

The 80 is a filamentary full-wave high-vacuum rectifier designed for use in the power supply of a-c operated equipment. Electrically the 80 is similar to the 5Y3-GT and 5Y4-G.

**GENERAL**

**ELECTRICAL**

- Cathode—Coated Filament
- Filament Voltage, AC . . . . . 5.0 Volts
- Filament Current . . . . . 2.0 Amperes

**MECHANICAL**

- Mounting Position—Vertical\*
- ⊕Envelope—T-9 or ST-14, Glass
- ⊕Base—A4-5, Small 4-Pin  
or A4-9, Medium 4-Pin

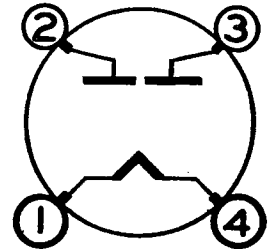
**MAXIMUM RATINGS**

**RECTIFIER SERVICE†**

**DESIGN-CENTER VALUES**

- Peak Inverse Plate Voltage . . . . . 1400 Volts
- ⊕AC Peak-Supply Voltage per Plate—See Rating Chart‡
- ⊕Steady-State Peak Plate Current per Plate . . . . . 400 Milliamperes
- ⊕Transient Peak Plate Current per Plate,  
Maximum Duration 0.2 Second . . . . . 2.2 Amperes
- ⊕DC Output Current—See Rating Chart‡

**BASING DIAGRAM**

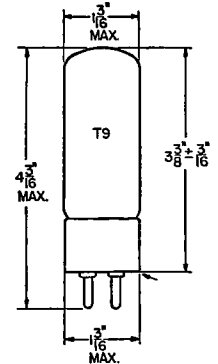


RETMA 4C

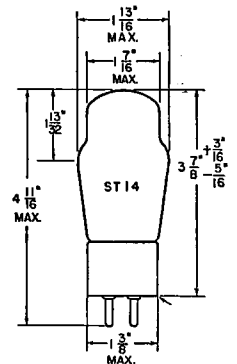
**TERMINAL CONNECTIONS**

- Pin 1—Filament
- Pin 2—Plate Number 2
- Pin 3—Plate Number 1
- Pin 4—Filament

**PHYSICAL DIMENSIONS**



RETMA 9-26  
OR  
RETMA 14-1



Supersedes ET-T416, dated 5-46

## CHARACTERISTICS AND TYPICAL OPERATION

⊕ **FULL-WAVE RECTIFIER**

	Capacitor- Input Filter	Choke- Input Filter
AC Plate-Supply Voltage per Plate, RMS . . . . .	350	500 Volts
Filter Input Capacitor . . . . .	10	. . . Microfarads
Filter Input Choke . . . . .	. . . . .	10 Henrys
Effective Plate-Supply Resistance per Plate . . . . .	50	. . . Ohms
DC Output Current . . . . .	125	125 Milliamperes
DC Output Voltage at Filter Input . . . . .	350	390 Volts
<b>Tube Voltage Drop</b>		
$I_b = 125$ Milliamperes DC per Plate . . . . .	60	Volts

\* Horizontal operation is permitted if pins 1 and 4 are in a horizontal plane.

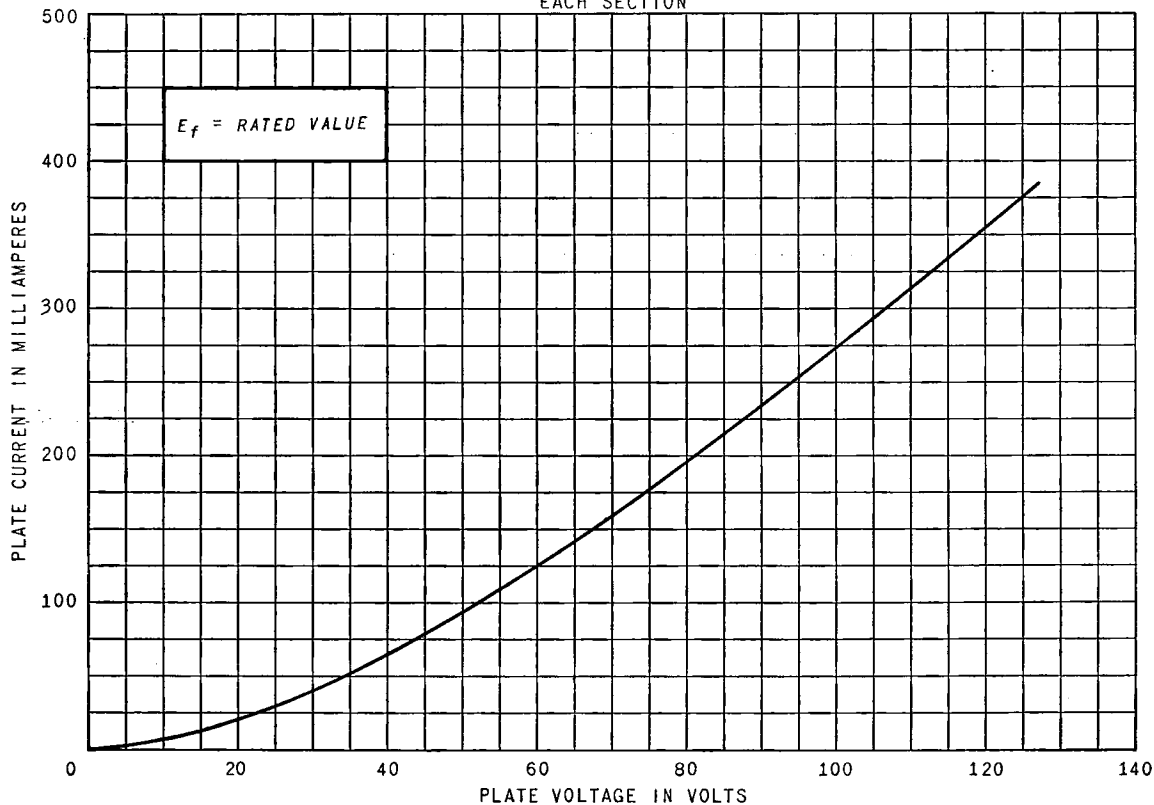
† For use with sinusoidal supply voltages within the frequency range of 25 to 1000 cycles per second.

‡ The maximum ratings for a-c plate supply voltage and d-c output current are interrelated and are also dependent on whether a choke- or capacitor-input filter is employed. This relationship is shown in the Rating Chart. With a capacitor-input filter, the operating point of d-c output current and a-c supply voltage must fall within the curve FAEDG. With a choke-input filter, the operating point must fall within the curve FABCDG.

⊕ Denotes a change.

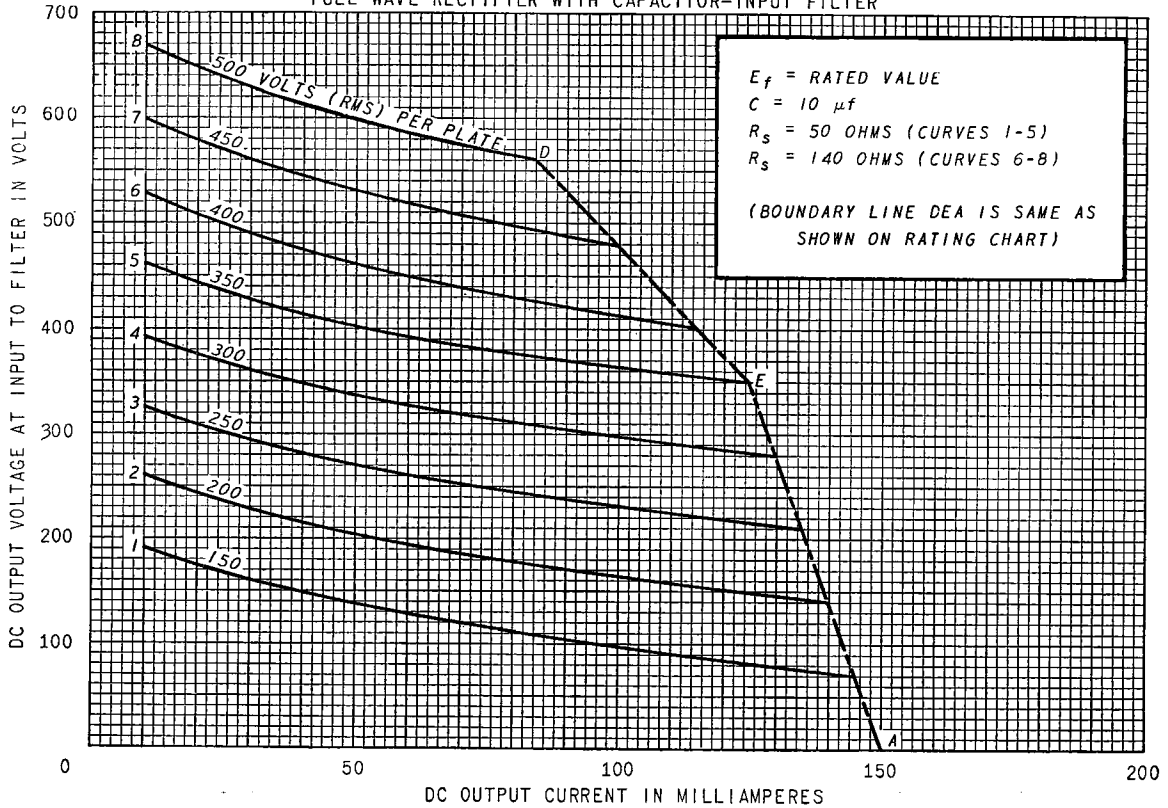
### AVERAGE PLATE CHARACTERISTICS

EACH SECTION



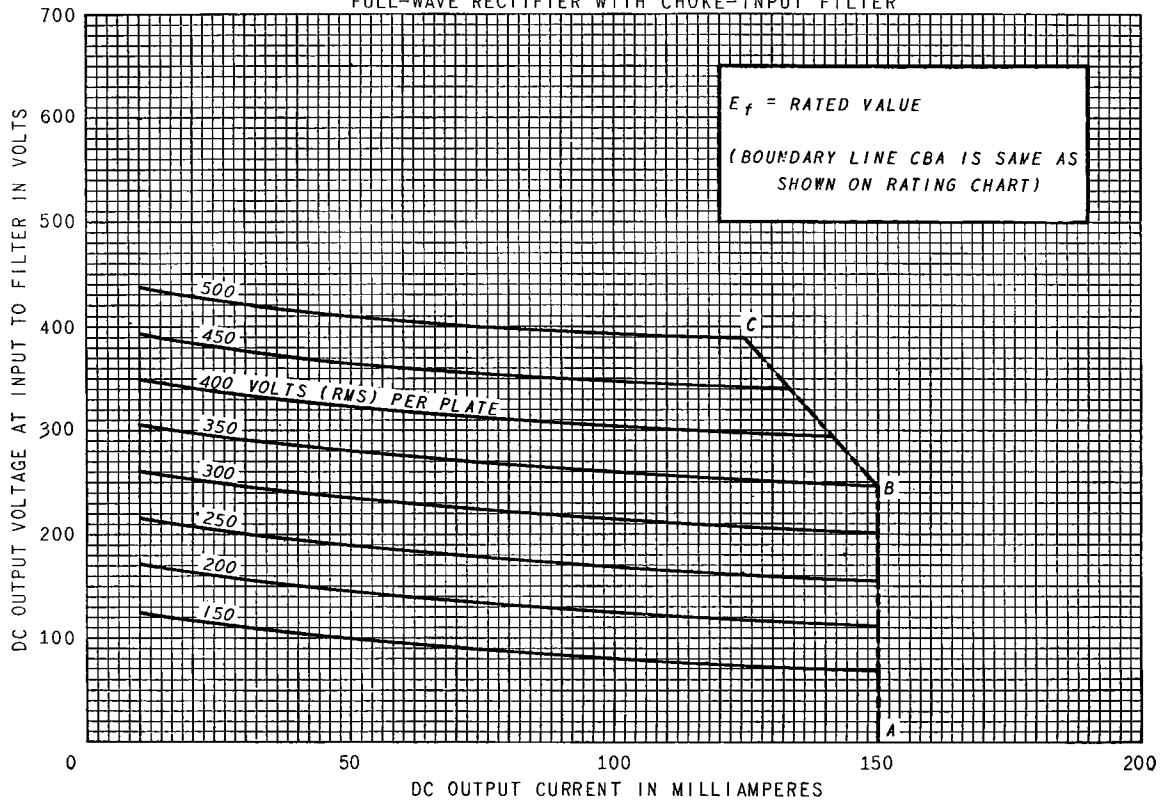
### OPERATION CHARACTERISTICS

FULL-WAVE RECTIFIER WITH CAPACITOR-INPUT FILTER

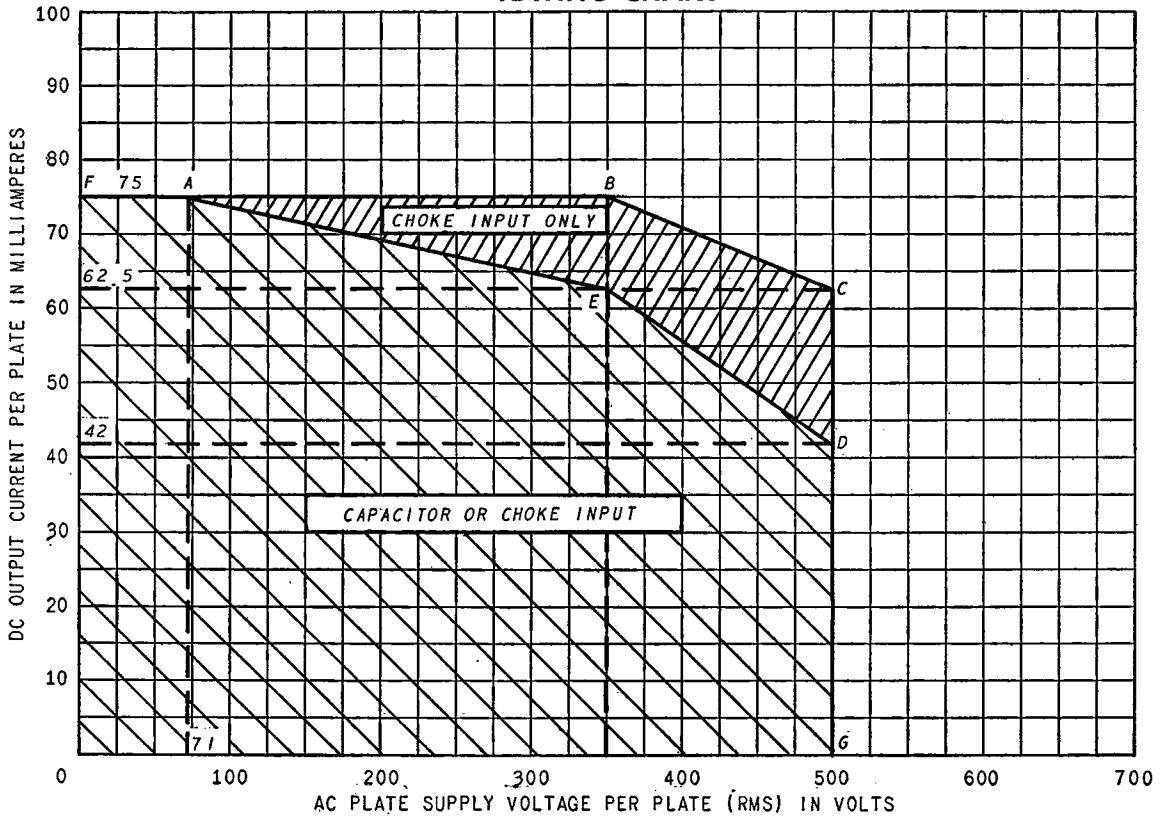


### OPERATION CHARACTERISTICS

FULL-WAVE RECTIFIER WITH CHOKE-INPUT FILTER



### RATING CHART



TUBE DEPARTMENT  
**GENERAL ELECTRIC**  
 Schenectady 5, N. Y.