



# 5Y3-GT

**5Y3-GT**  
**ET-T965**  
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## TWIN DIODE

**FOR FULL-WAVE POWER RECTIFIER APPLICATIONS**

### DESCRIPTION AND RATING

The 5Y3-GT is a filamentary twin-diode designed for full-wave rectifier operation in power supplies that have d-c output current requirements up to approximately 125 milliamperes.

#### GENERAL

##### ELECTRICAL

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

##### MECHANICAL

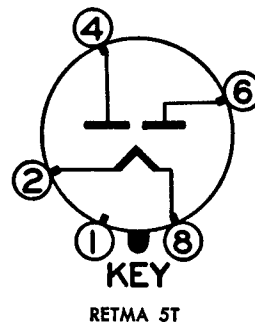
Mounting Position—Vertical\*  
 Envelope—T-9, Glass  
 Base—B5-10, Intermediate Shell Octal 5-Pin  
 or B5-62, Short Intermediate Shell Octal 5-Pin

#### MAXIMUM RATINGS

##### RECTIFIER SERVICE—DESIGN-CENTER VALUES†

Peak Inverse Plate Voltage ..... 1400 Volts  
 AC Plate-Supply Voltage per Plate—See Rating Chart †‡  
 Steady-State Peak Plate Current per Plate ..... 440 Milliamperes  
 Transient Peak Plate Current per Plate, Maximum Duration 0.2  
 Second ..... 2.5 Amperes  
 DC Output Current—See Rating Chart †‡

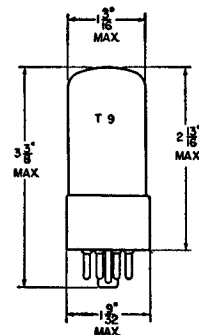
#### BASING DIAGRAM



#### TERMINAL CONNECTIONS

Pin 1—No Connection  
 Pin 2—Filament  
 Pin 4—Plate Number 2  
 Pin 6—Plate Number 1  
 Pin 8—Filament

#### PHYSICAL DIMENSIONS



RETMA 9-13 OR 9-42



Supersedes ET-T250B, dated 6-50

## CHARACTERISTICS AND TYPICAL OPERATION

### FULL-WAVE RECTIFIER

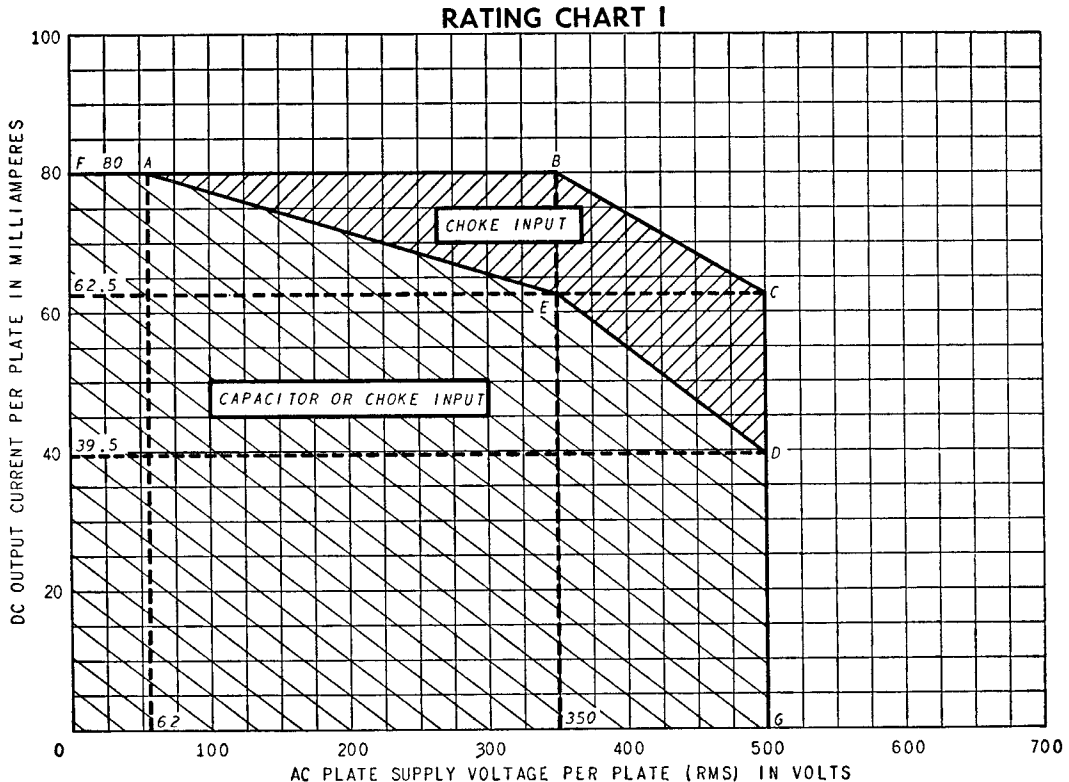
	Capacitor- Input Filter	Choke Input Filter
AC Plate-Supply Voltage per Plate, RMS.....	350	500 Volts
Filter Input Capacitor.....	20	... Microfarads
Filter Input Choke.....	...	10 Henrys
Total Plate-Supply Resistance per Plate.....	50	... Ohms
DC Output Current.....	125	125 Milliampers
DC Output Voltage at Filter Input.....	360	380 Volts
 Tube Voltage Drop		
$I_b = 125$ Milliampers DC per Plate.....	50	Volts

\* Horizontal operation is permitted if pins 2 and 4 are in a vertical plane.

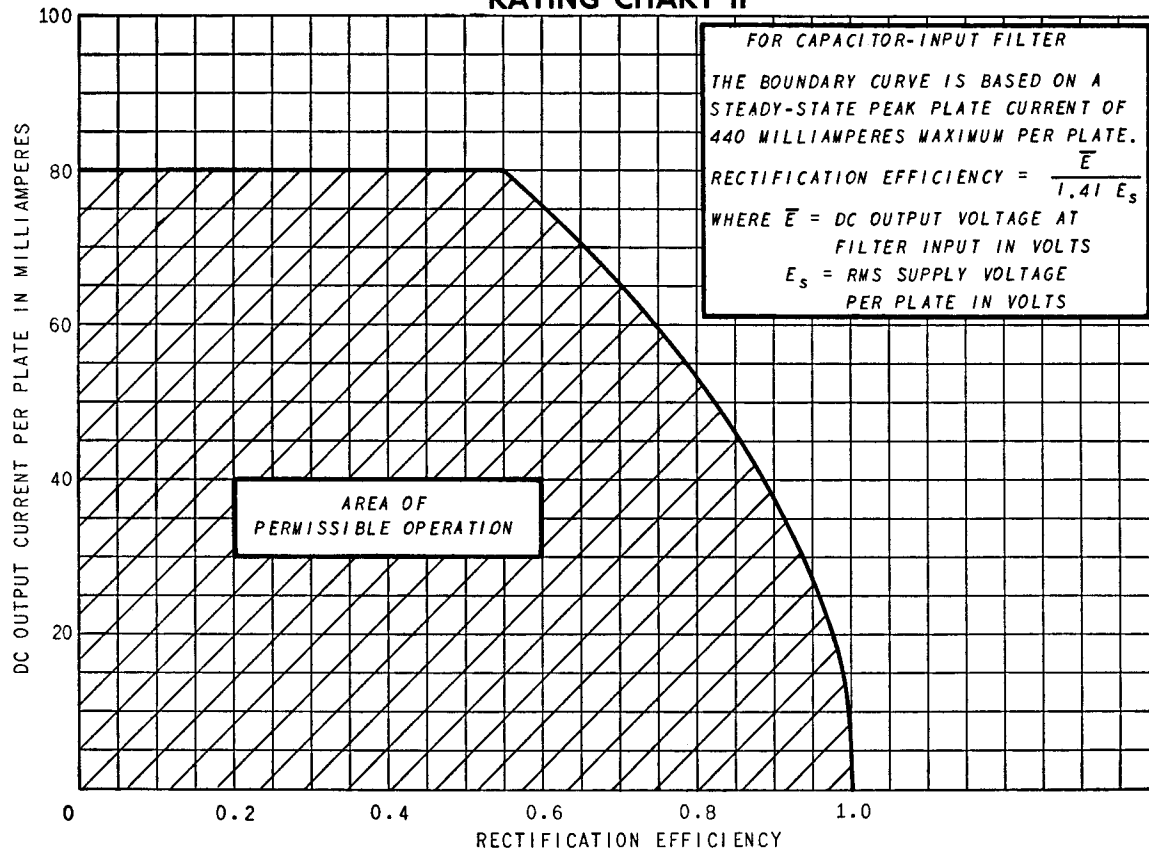
† To simplify the application of the maximum ratings to circuit design, the electrical design-center maximum ratings are also presented in chart form as Rating Charts I, II, and III. Rating Chart I presents the maximum ratings for a-c plate supply voltage and d-c output current. Rating Chart II provides a convenient method for checking conformance with the maximum steady-state peak-plate-current rating. Rating Chart III offers a convenient method for checking conformance with the maximum transient peak-plate-current rating.  
 With a capacitor-input filter, the conditions of each of Rating Charts I, II, and III must be satisfied; with a choke-input filter, operation must be within the indicated boundary of Rating Chart I.

‡ 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 Rating Chart I. 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.

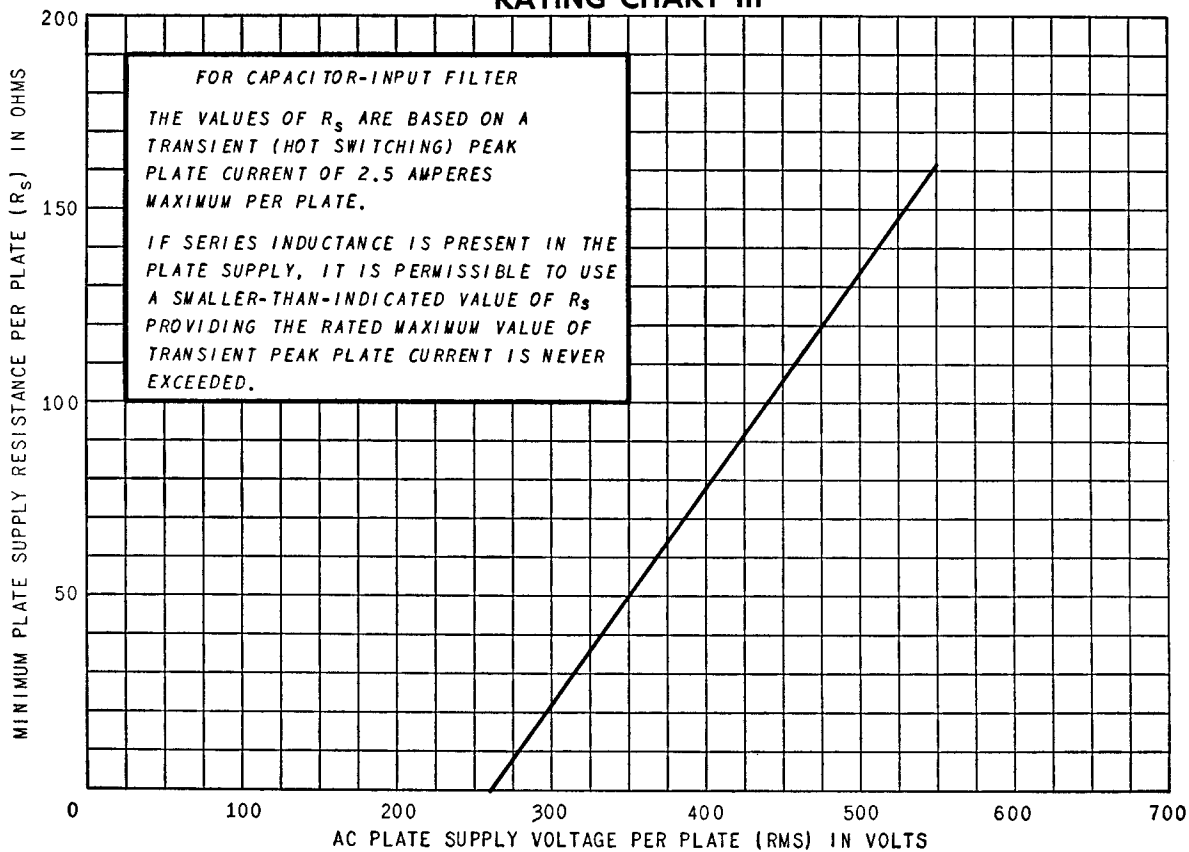
Note: The indicated values of a-c plate supply voltage shown throughout the data are measured without load.



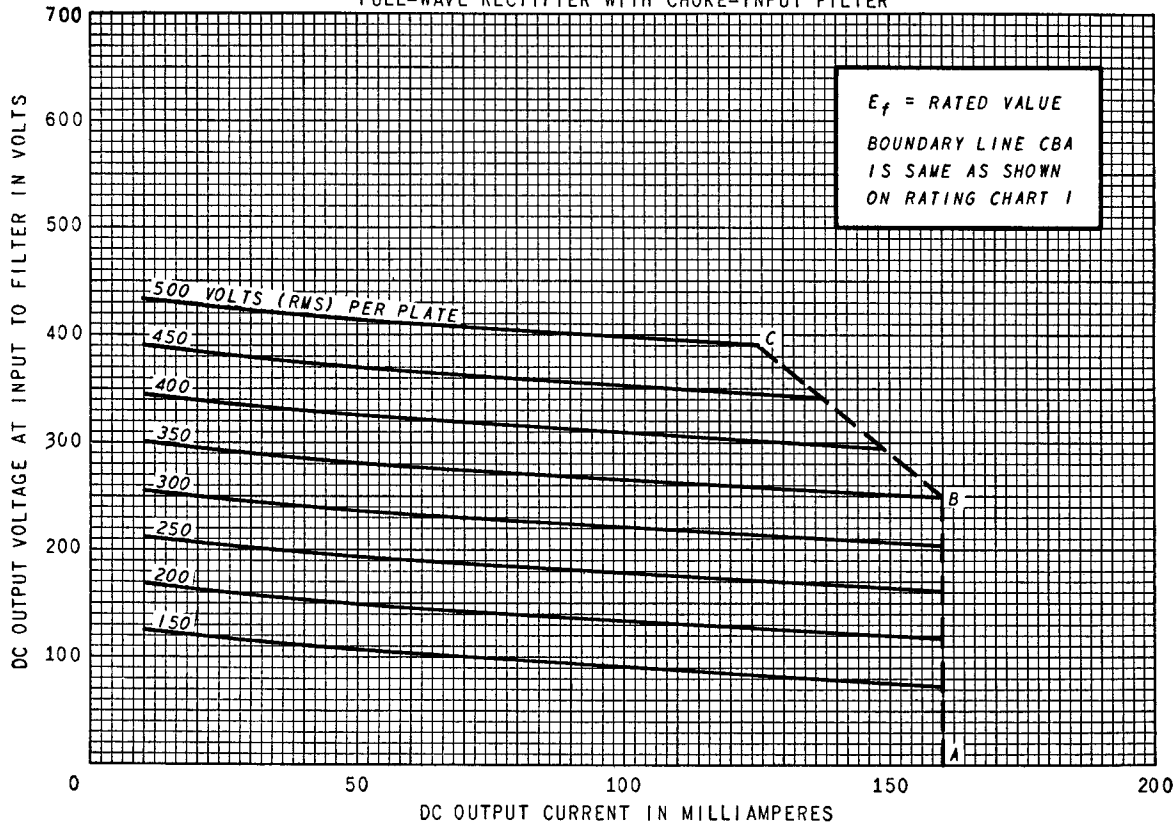
**RATING CHART II**



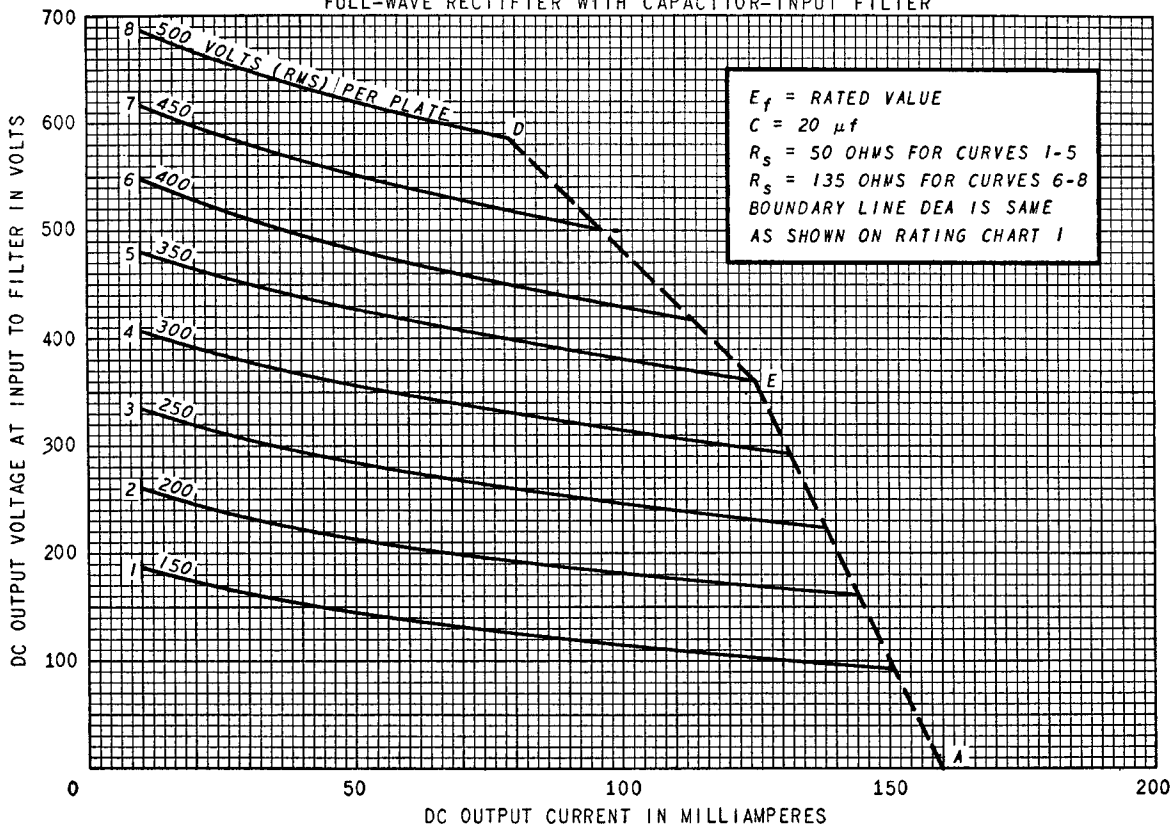
**RATING CHART III**



**OPERATION CHARACTERISTICS**  
 FULL-WAVE RECTIFIER WITH CHOKE-INPUT FILTER



**OPERATION CHARACTERISTICS**  
 FULL-WAVE RECTIFIER WITH CAPACITOR-INPUT FILTER



### AVERAGE PLATE CHARACTERISTICS

EACH SECTION

