Electronic TUBES

5U4-GB

TWIN DIODE

FOR FULL-WAVE POWER RECTIFIER APPLICATIONS

DESCRIPTION AND RATING

The 5U4-GB is a filamentary twin diode designed for use as a full-wave rectifier in the power supply of television receivers or other equipment which have high direct-current requirements. The 5U4-GB employs a straight-sided T-12 envelope and may be used as a replacement for either the 5U4-G or 5U4-GA.

GENERAL

ELECTRICAL

Cathode—Coated Filament
Filament Voltage, AC or DC . . . . . 5.0 Volts
Filament Current . . . . . 3.0 Amperes

MECHANICAL

Mounting Position—Vertical*
Envelope—T-12, Glass
Base—B5-121 or B5-113, Short Medium Shell Octal 5-Pin
or B5-127, Flared Medium Shell Octal 5-Pin
or B8-118, Short Medium Shell Octal 8-Pin

MAXIMUM RATINGS

RECTIFIER SERVICE—DESIGN-CENTER VALUES†

Peak Inverse Plate Voltage . . . . . 1550 Volts
AC Plate-Supply Voltage per Plate—See Rating Chart I‡
Steady-State Peak Plate Current per Plate . . . . . 1000 Milliamperes
Transient Peak Plate Current per Plate,
Maximum Duration 0.2 Second . . . . . 4.6 Amperes
DC Output Current—See Rating Chart I‡

CHARACTERISTICS AND TYPICAL OPERATION

FULL-WAVE RECTIFIER WITH CAPACITOR-INPUT FILTER

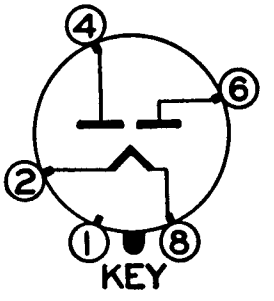
AC Plate-Supply Voltage per Plate, RMS	300	450 Volts
Filter Input Capacitor	40	40 Microfarads
Total Plate-Supply Resistance per Plate	21	67 Ohms
DC Output Current	300	275 Milliamperes
DC Output Voltage at Filter Input	290	460 Volts

FULL-WAVE RECTIFIER WITH CHOKE-INPUT FILTER

AC Plate-Supply Voltage per Plate, RMS . . . . . 550 Volts
Filter Input Choke . . . . . 10 Henrys
DC Output Current . . . . . 275 Milliamperes
DC Output Voltage at Filter Input . . . . . 440 Volts
Tube Voltage Drop
Ib = 275 Milliamperes DC per Plate . . . . . 50 Volts

GENERAL ELECTRIC

BASING DIAGRAM

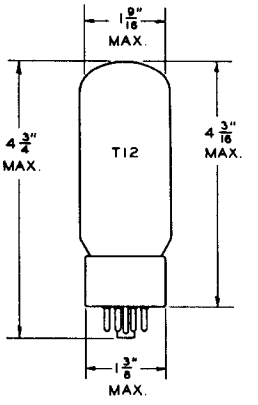


RETMA 5T

TERMINAL CONNECTIONS

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

PHYSICAL DIMENSIONS



Electronic TUBES

5Y3-GT

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

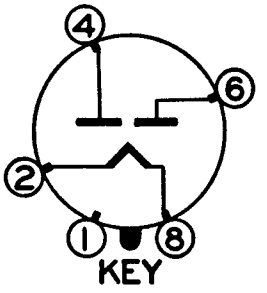
Mounting Position—Vertical*
Envelope—T-9, Glass
Base—B5-10, Intermediate Shell Octal 5-Pin
or B5-62, Short Intermediate Shell Octal 5-Pin

MAXIMUM RATINGS

RECTIFIER SERVICE—DESIGN-CENTER VALUES†

Peak Inverse Plate Voltage	1400	Volts
AC Plate-Supply Voltage per Plate—See Rating Chart I‡		
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 I‡		

BASING DIAGRAM

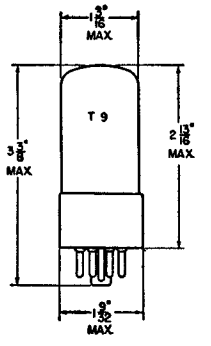


RETMA 5T

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

GENERAL ELECTRIC

Supersedes ET-T250B, dated 6-50

SYLVANIA

engineering data service

SYLVANIA
6X4
12X4

MECHANICAL DATA

Bulb	T-5½
Base	E7-1, Miniature Button 7-Pin
Outline	5-3
Basing	5BS
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

	6X4	12X4
Heater Voltage[1]	6.3	12.6 Volts
Heater Current	600	300 Ma
Heater-Cathode Voltage (Design Center Values)		
Heater Negative with Respect to Cathode		
Total DC and Peak	450	450 Volts Max.
Heater Positive with Respect to Cathode		
Total DC and Peak	100	100 Volts Max.

RATINGS (Design Center Values)

Peak Inverse Plate Voltage	1250 Volts Max.
A C Plate Supply Voltage, R M S (Each Plate)	See Rating Chart I
Steady State Peak Plate Current, Rating Chart II (Each Plate)	210 Ma Max.
Transient Peak Plate Current, Rating Chart III (Each Plate)[2]	1.0 Ampere Max.
D C Output Current (Each Plate)	See Rating Chart I

CHARACTERISTICS

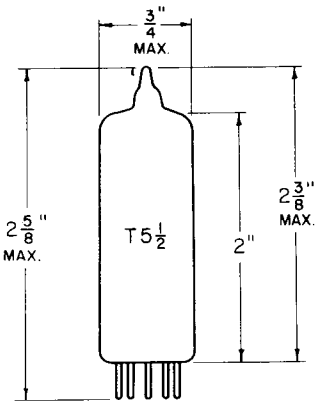
Tube Voltage Drop, I_b = 70 Ma Each Plate	22 Volts

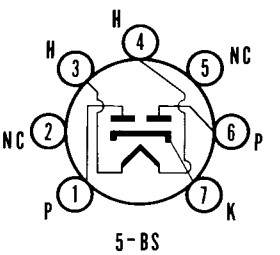
TYPICAL OPERATION

Full-Wave Rectifier-Capacitor Input	
A C Plate Supply Voltage Per Plate	325 Volts
Filter Input Capacitor[3]	10 µf
Total Effective Plate Supply Impedance (Per Plate)	525 Ohms
D C Output Current	70 Ma
D C Output Voltage at Filter Input (approx.)	
For D C Cathode Current of 35 Ma	365 Volts
70 Ma	310 Volts
Difference (Voltage Regulation)	55 Volts
Percentage Regulation	15 Percent
Full-Wave Rectifier Service — Choke Input	
A C Plate Supply Voltage Per Plate (R M S)	450 Volts
Filter Input Choke	10 Henrys
D C Output Current	70 Ma
D C Output Voltage at Filter Input (approx.)	
For D C Cathode Current of 35 Ma	395 Volts
70 Ma	385 Volts
Difference (Voltage Regulation)	10 Volts
Percentage Regulation	2.5 Percent

QUICK REFERENCE DATA

The Sylvania Types 6X4 and 12X4 are miniature, full-wave, cathode type rectifiers. They are intended for service in compact a c or auto receivers where the average current is not in excess of 70 Ma. Except for heater current and voltage the 6X4 is identical to the 12X4.





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