

August 5, 1954

Half-Wave Vacuum Rectifier Type 35W4

The 35W4 is a 7-pin miniature half-wave rectifier designed for service in power supplies of ac-dc receivers. The heater is provided with a tap for operation of a panel lamp. The 35W4 must be adequately ventilated, as the tube operates at high temperatures.

GENERAL DATA

Electrical:

Cathode	Coated Unipotential	
	Without	With #40 or #47
Heater Voltage	Panel Lamp	Panel Lamp
Entire Heater		
(pins 3 & 4)	35	32 ac or dc Volts
Panel Lamp Section		
(pins 4 & 6)	7.5	5.5 ac or dc Volts
Heater Current		
Between Pins 3 & 4	0.15	— Ampere
Between Pins 3 & 6	—	0.15 Ampere

Mechanical:

Bulb	T-5½
Base	Small-Button Miniature 7-Pin
Basing	5BQ
Mounting Position	Any

HALF-WAVE RECTIFIER

Maximum Ratings

Design Center Values

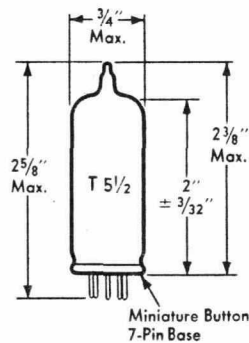
Peak Inverse Plate Voltage	330 max. Volts
Peak Plate Current per Plate	600 max. Ma.
Peak-Heater Cathode Voltage	
Heater Positive or Negative with	
Respect to Cathode	330 max. Volts
Panel-Lamp-Section Voltage (RMS)	
When Panel Lamp Fails	15 max. Volts
DC Output Current	
With Panel Lamp and No Shunting Resistor ..	60 max. Ma.
With Panel Lamp and Shunting Resistor	90 max. Ma.
Without Panel Lamp	100 max. Ma.

Typical Operating Conditions

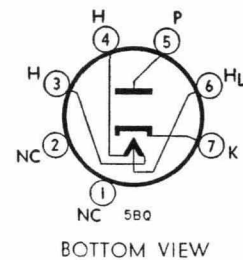
With #40 or #47 Panel Lamp

Half-Wave Rectifier—Capacitor Input to Filter

AC Plate Supply Voltage					
per Plate (RMS)	117	117	117	117	Volts
Filter Input Capacitor	40	40	40	40	μf
Minimum Effective Plate Supply					
Impedance per Plate*	15	15	15	15	Ohms
Panel Lamp Shunting Resistor ..	—	300	150	100	Ohms
DC Output Current	60	70	80	90	Ma.



CE-A353



BOTTOM VIEW

Typical Operating Conditions Without Panel Lamp**

Half-Wave Rectifier—Capacitor Input to Filter			
AC Plate Supply Voltage per Plate (RMS)	117	Volts	
Filter Input Capacitor	40	μ f	
Minimum Effective Plate Supply Impedance per Plate*	15	Ohms	
DC Output Voltage at Input to Filter (Approx.):			
At Half-Load Current of 50 ma.	135	Volts	
At Half-Load Current of 100 ma.	120	Volts	
DC Output Current	100	Ma.	
Voltage Regulation (Approx.)			
Half-Load to Full-Load Current	15	Volts	

Maximum Circuit Values:

Panel Lamp Shunting Resistor †

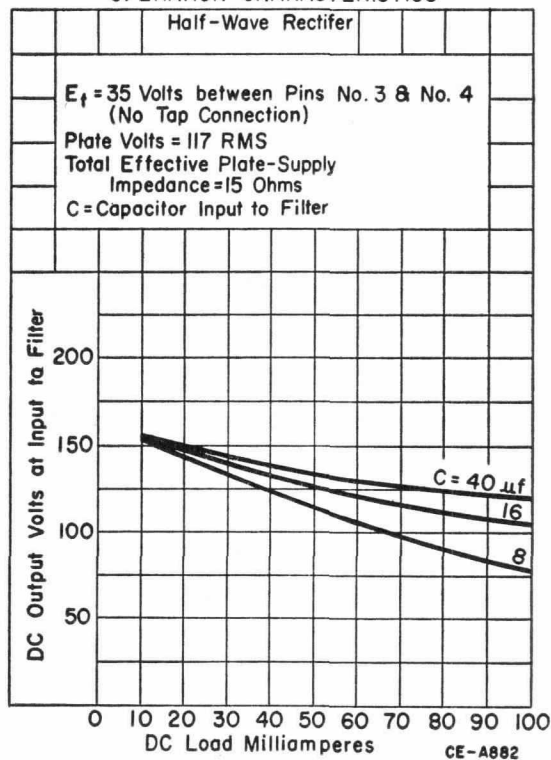
For DC Output Current of	70 ma.	800 max. Ohms
	80 ma.	400 max. Ohms
	90 ma.	250 max. Ohms

* When filter-input capacitors larger than the value indicated are used, it may be necessary to increase the plate supply impedance to keep within maximum ratings.

** Plate current must not flow through tap section.

† Required when DC output current is greater than 60 milliamperes.

OPERATION CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS

