35Y4
HALF-WAVE VACUUM RECTIFIER

GENERAL DATA

Electrical:

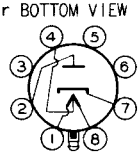
	Without Panel Lamp	*With No.40 or No.47 Panel Lamp*▲	
Heater, for Unipotential Cathode:			
Voltage (AC or DC):			
Entire Heater (pins 1 & 8) . .	35	32 . .	volts
Panel-Lamp Section (pins 1 & 4) .	7.5	5.5 . .	volts
Current { between pins 1 & 8 . .	0.15	– . .	amp
Current { between pins 4 & 8 . .	–	0.15 . .	amp

▲ Under typical operating conditions shown below.

Mechanical:

Mounting Position	Any
Maximum Overall Length	3-5/32"
Maximum Seated Length	2-5/8"
Maximum Diameter	1-3/16"
Bulb	T-9
Base	Lock-in 8-Pin
Basing Designation for BOTTOM VIEW	5AL

Pin 1 – Heater
Pin 2 – Plate
Pin 3 – No Connection
Pin 4 – Heater Tap
Pin 5 – No Connection
Pin 6 – No Connection



Pin 7 – Cathode
Pin 8 – Heater
Plug – Base Shell
Panel-Lamp Heater Section is between pins 1 & 4

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Maximum Ratings, *Design-Center Values*:

PEAK INVERSE PLATE VOLTAGE	700 max.	volts
PEAK PLATE CURRENT	600 max.	ma
DC OUTPUT CURRENT:		
With Panel Lamp & { No Shunting Resistor. .	60 max.	ma
With Panel Lamp & { Shunting Resistor . . .	90 max.	ma
Without Panel Lamp	100 max.	ma
PANEL-LAMP-SECTION VOLTAGE (RMS):		
When panel lamp fails.	15 max.	volts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode .	300 max.	volts
Heater positive with respect to cathode .	300 max.	volts

Typical Operation With No.40 or No.47 Panel Lamp in Circuit Below with Capacitor-Input Filter:

AC Plate-Supply Volt. (RMS)	117	117	117	117	235	volts
Filter-Input Capacitor . .	40	40	40	40	40	μf
Min. Total Effective Plate-Supply Impedance .	15	15	15	15	100	ohms
Panel-Lamp Shunting Res. .	–	300	150	100	–	ohms
DC Output Current.	60	70	80	90	60	ma

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Typical Operation Without Panel Lamp in Conventional Half-Wave Circuit with Capacitor-Input Filter:

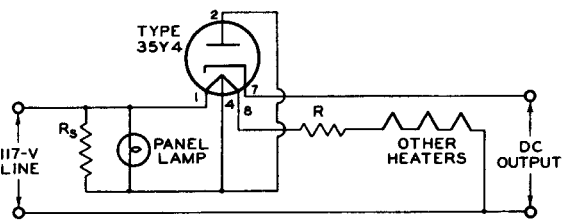
AC Plate-Supply Voltage (RMS)	117	235	volts
Filter-Input Capacitor	40	40	μf
Min. Total Effective Plate-Supply Imped.	15	100	ohms
DC Output Current	100	100	ma
DC Output Voltage at Input to Filter (Approx.):			
At half-load current (50 ma.)	140	280	volts
At full-load current (100 ma.)	120	235	volts
Voltage Regulation (Approx.):			
Half-load to full-load current	20	45	volts

Maximum Circuit Values:

Panel-Lamp Shunting Resistor:*

For dc output current of 70 ma.	800 max.	ohms
For dc output current of 80 ma.	400 max.	ohms
For dc output current of 90 ma.	250 max.	ohms

* Required when dc output current is greater than 60 ma.



DROP ACROSS R AND ALL HEATERS (WITH PANEL LAMP) SHOULD EQUAL 117 VOLTS AT 0.15 AMPERE. R_S = SHUNTING RESISTOR REQUIRED WHEN DC OUTPUT CURRENT EXCEEDS 60 MILLIAMPERES

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