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HALF-WAVE VACUUM RECTIFIER

GENERAL DATA

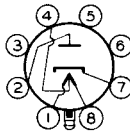
Electrical:	Without Panel Lamp		With No.40 Panel Lamp		With No.47 Panel Lamp [▲]	
Heater, for Unipotential Cathode:						
Voltage (AC or DC):						
Entire Heater (pins 1 & 8) . . .	35		32			volts
Panel-Lamp Section (pins 1 & 4) . .	7.5		5.5			volts
Current {	between pins 1 & 8 . . .	0.15	-			amp
	between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

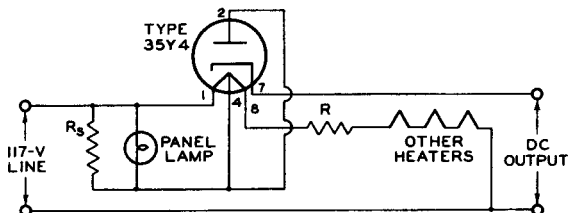
AC Plate-Supply Voltage (RMS)	117	235	volts
Filter-Input Capacitor	40	40	μ f
Min. Total Effective Plate-Supply Imped.	15	100	ohms
DC Output Current	100	100	ma
DC Output Voltage at Input to Filter (Approx.):			
At half-load current (50 ma.)	140	280	volts
At full-load current (100 ma.)	120	235	volts
Voltage 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
	80 ma.	400 max.	ohms
	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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