



50Y7-GT

VACUUM RECTIFIER-DOUBLER

50Y7-GT

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 2 & 7)	50	46	volts
Panel-Lamp Section (pins 6 & 7)	7.5	5.5	volts
Current { between pins 2 & 7	0.15	-	amp
{ between pins 2 & 6	-	0.15	amp

Mechanical:

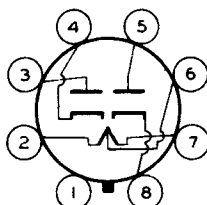
Mounting Position	Any
Maximum Overall Length	3-5/16"
Maximum Seated Length	2-3/4"
Maximum Diameter	1-9/32"
Bulb	T-9
Base	Intermediate-Shell Octal 8-Pin
Basing Designation for BOTTOM VIEW	G-8AN

Pin 1—No Connection

Pin 2—Heater

Pin 3—Plate No. 2

Pin 4—Cathode No. 2



Pin 5—Plate No. 1

Pin 6—Heater Tap

Pin 7—Heater

Pin 8—Cathode No. 1

RECTIFIER OR DOUBLER

Maximum Ratings, Design-Center Values:

PEAK INVERSE PLATE VOLTAGE	700 max.	volts
PEAK PLATE CURRENT PER PLATE	450 max.	ma
DC OUTPUT CURRENT PER PLATE		
With Panel Lamp & { No Shunting Resistor	60 max.	ma
{ Shunting Resistor*	65 max.	ma
Without Panel Lamp	75 max.	ma
PANEL-LAMP-SECTION VOLTAGE (RMS):		
When panel lamp fails	15 max.	volts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	350 max.	volts
Heater positive with respect to cathode	350 max.	volts

Typical Operation with No. 40 or No. 47 Panel Lamp in
Half-Wave Rectifier Circuit with Capacitor-Input Filter:

AC Plate-Supply Volt. per Plate (RMS)	117	150	235	volts
Filter-Input Capacitor	16	16	16	μf
Min. Total Effect. Plate-Supply Imped. per Plate	15	40	100	ohms
Panel Lamp Shunting Resistor	250	250	250	ohms
DC Output Current per Plate	65	65	65	ma

* Max. value of this resistor is 250 ohms for dc output current of 65 ma.

FEB. 1, 1950

TUBE DEPARTMENT

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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VACUUM RECTIFIER-DOUBLER

**Typical Operation with No.40 or No.47 Panel Lamp in
Voltage-Doubler Circuit:**
Half-Wave Full-Wave

AC Plate Supply Voltage			
per Plate (RMS)	117	117	volts
Filter-Input Capacitor	16	16	μ f
Min. Total Effect. Plate-			
Supply Imped. per Plate.	30	15	ohms
Panel Lamp Shunting Resistor	250	250	ohms
DC Output Current per Plate.	65	65	ma

**Typical Operation Without Panel Lamp in
Half-Wave Rectifier Circuit with Capacitor-Input Filter:^o**
Values are for both units connected in parallel

AC Plate Supply Voltage (RMS)	117	150	235	volts
Filter-Input Capacitor	16	16	16	μ f
Min. Total Effect. Plate-				
Supply Imped. per Plate.	15	40	100	ohms
Total DC Output Current.	150	150	150	ma
DC Output Voltage at Input				
to Filter (Approx.):				
At half-load current (75 ma.)	115	-	255	volts
At full-load current (150 ma.)	80	-	200	volts
Voltage Regulation (Approx.):				
Half-load to full-load current	35	-	55	volts

**Typical Operation Without Panel Lamp in
Full-Wave Voltage-Doubler Circuit:^o**

AC Plate Supply Voltage per Plate (RMS)	117	volts
Filter-Input Capacitor	16	μ f
Min. Total Effective Plate-		
Supply Impedance per Plate	15	ohms
DC Output Current.	75	ma
DC Output Voltage at Input		
to Filter (Approx.):		
At half-load current (37.5 ma.)	250	volts
At full-load current (75 ma.)	205	volts
Voltage Regulation (Approx.):		
Half-load to full-load	45	volts

^o Plate current must not flow through heater section between pins 6 and 7.

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