Electronic TUBE
KEN-RAD

35Y4

Description and Rating

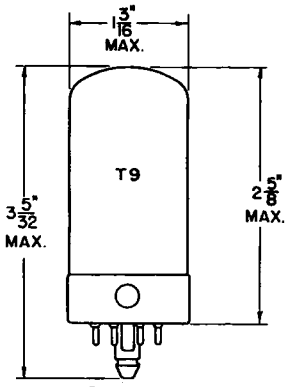
HALF-WAVE RECTIFIER

GENERAL DESCRIPTION

Principal Application: The 35Y4 is a half-wave high-vacuum rectifier designed for use in a-c/d-c receivers. The heater is tapped to permit operation of a panel lamp. It is recommended that the plate be connected to the heater tap so that the plate current will pass through the panel lamp and the tapped section of the heater.

Cathode	Coated Unipotential
Heater Voltage (A-C or D-C)	35.0 Volts
Heater Tap Voltage*	7.5 Volts
Heater Current	0.15 Ampere
Envelope	T-9 Glass
Base	D8-1 Locking-In 8-Pin
Mounting Position	Any

PHYSICAL DIMENSIONS

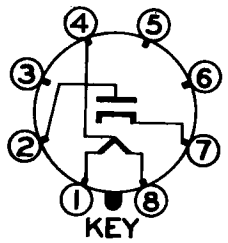


RMA 9-31

TERMINAL CONNECTIONS

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

BASING DIAGRAM



RMA 5AL
BOTTOM VIEW

MAXIMUM RATINGS

DESIGN CENTER VALUES:

Peak Inverse Voltage	700	Volts
Peak Plate Current	600	Milliamperes
A-C Plate Voltage (RMS)	235	Volts
D-C Output Current		
Without Panel Lamp	100	Milliamperes
With Panel Lamp and Shunting Resistor	90	Milliamperes
With Panel Lamp and No Shunting Resistor	60	Milliamperes
Panel Lamp Shunting Resistor		
For 70 Milliamperes D-C Output Current	800	Ohms
For 80 Milliamperes D-C Output Current	400	Ohms
For 90 Milliamperes D-C Output Current	250	Ohms
Heater Tap Voltage (RMS) When Panel Lamp Fails	15	Volts
D-C Heater-Cathode Voltage	350	Volts
Tube Voltage Drop **	20	Volts

* *Between pins number 1 and number 4 with 0.15 ampere flowing between pins number 1 and number 8.*

** *At 200 milliamperes d-c plate current.*

CHARACTERISTICS AND TYPICAL OPERATION

HALF-WAVE RECTIFIER - WITH PANEL LAMP NUMBER 40 OR NUMBER 47

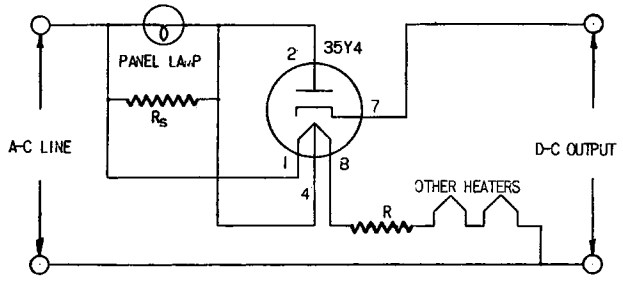
Heater Voltage Between Pins 1 and 8	32	32	32	32	32	Volts
Heater Tap Voltage Between Pins 1 and 4	5.5	5.6	5.5	5.5	5.6	Volts
Heater Current Between Pins 4 and 8	0.15	0.15	0.15	0.15	0.15	Ampere
A-C Plate-Supply Voltage (RMS)	117	117	117	117	235	Volts
Filter Input Capacitor	40	40	40	40	40	Microfarads
Minimum Total Effective Plate-Supply Impedance	15	15	15	15	100	Ohms
Panel Lamp Shunting Resistance#	---	300	150	100	---	Ohms
D-C Output Current	60	70	80	90	60	Milliamperes

HALF-WAVE RECTIFIER - WITHOUT PANEL LAMP

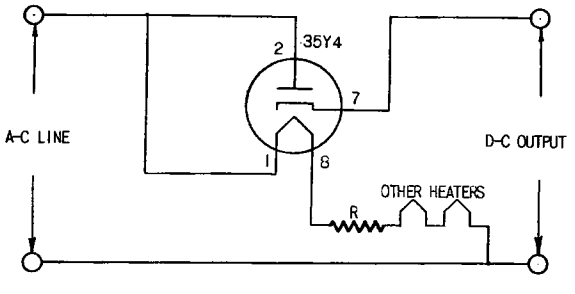
Heater Voltage Between Pins 1 and 8	35	35	Volts
Heater Tap Voltage Between Pins 1 and 4	7.6	7.6	Volts
Heater Current Between Pins 4 and 8	0.15	0.15	Ampere
A-C Plate-Supply Voltage (RMS)	117	235	Volts
Filter Input Capacitor	40	40	Microfarads
Minimum Total Effective Plate-Supply Impedance	15	100	Ohms
D-C Output Current	100	100	Milliamperes
D-C Voltage at Input to Filter (Approximate)			
At 50 Milliamperes Half-Load Current	140	280	Volts
At 100 Milliamperes Full-Load Current	120	235	Volts
Difference (Voltage Regulation)	20	45	Volts
Percentage Regulation	14	16	Percent

 # Required if d-c output current is greater than 60 milliamperes.

TYPICAL CIRCUIT FOR OPERATION WITH PANEL LAMP



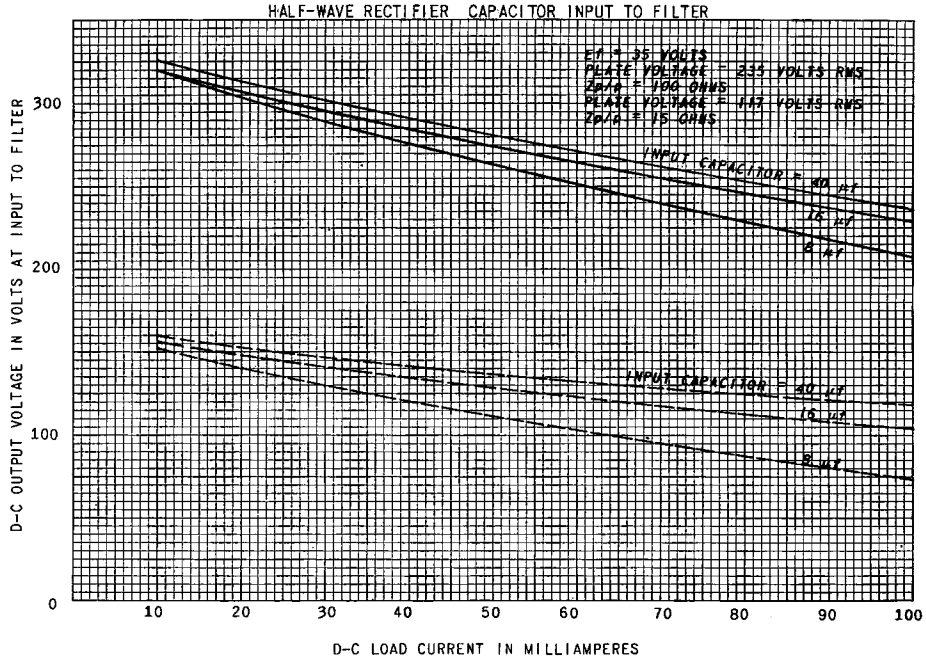
TYPICAL CIRCUIT FOR OPERATION WITHOUT PANEL LAMP



R_S = Panel-lamp shunting resistor required when current exceeds 60 milliamperes.

Drop across R at 0.15 ampere should equal difference between line voltage and total of all heater voltages.

OPERATION CHARACTERISTICS



Electronics Department

GENERAL ELECTRIC

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