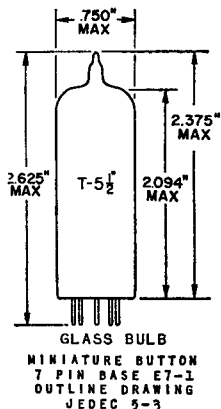


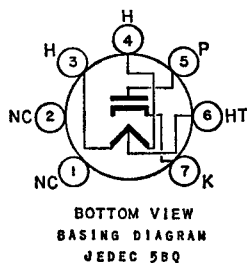
## TUNG-SOL

DIODE  
MINIATURE TYPE

COATED UNIPOTENTIAL CATHODE

HALF-WAVE RECTIFIER

ANY MOUNTING POSITION



THE 35W4 IS A MINIATURE CATHODE TYPE, HALF-WAVE RECTIFIER DESIGNED FOR SERVICE IN AC/DC RECEIVERS. THE TAPPED HEATER PERMITS OPERATION OF A PANEL LAMP. IT IS RECOMMENDED THAT THE PLATE CURRENT PASS THROUGH THE PANEL LAMP AND THE TAPPED SECTION OF THE HEATER. THIS IS ACCOMPLISHED BY CONNECTING PLATE TO THE HEATER TAP.

## HEATER CHARACTERISTICS AND RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	35 VOLTS	150	MA.
HEATER SUPPLY LIMITS:			
VOLTAGE OPERATION (WITHOUT PANEL LAMP)		35±3.5	VOLTS
(WITH #40 OR #47 PANEL LAMP)		32±3.2	VOLTS
MAXIMUM PEAK HEATER-CATHODE VOLTAGE:			
HEATER NEGATIVE WITH RESPECT TO CATHODE		360	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE		360	VOLTS

## MAXIMUM RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

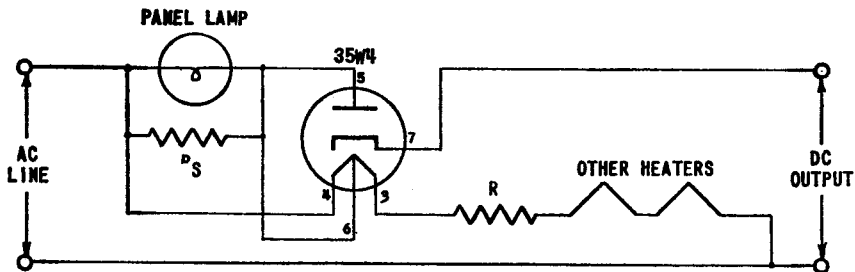
	WITHOUT PANEL LAMP	WITH #40 OR #47 PANEL LAMP	
HEATER VOLTAGE:			
ENTIRE HEATER (PINS #3 & #4)	35	32	VOLTS
PANEL LAMP SECTION (PINS #4 & #6)	7.5	5.5	VOLTS
HEATER CURRENT:			
BETWEEN PINS #3 & #4	150	---	MA.
BETWEEN PINS #3 & #6	---	150	MA.
PEAK INVERSE VOLTAGE	→ 360		VOLTS
STEADY-STATE PEAK PLATE CURRENT	→ 660		MA.
PANEL LAMP SECTION VOLTAGE WHEN LAMP FAILS	→ 17		VOLTS
STEADY STATE DC OUTPUT CURRENT:			
WITH PANEL LAMP AND NO SHUNTING RESISTOR	→ 66		MA.
WITH PANEL LAMP AND SHUNTING RESISTOR	→ 100		MA.
WITHOUT PANEL LAMP	→ 110		MA.
VALUE OF PANEL LAMP SHUNTING RESISTOR:			
FOR DC OUTPUT CURRENT OF 70 MA.	800		OHMS
FOR DC OUTPUT CURRENT OF 80 MA.	400		OHMS
FOR DC OUTPUT CURRENT OF 90 MA.	250		OHMS
TUBE VOLTAGE DROP MEASURED WITH TUBE CONDUCTING 200 MA. DC PLATE CURRENT	18		VOLTS

→ INDICATES A CHANGE.

CONTINUED FROM PRECEDING PAGE

**TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS**  
 WITH #40 OR #47 PANEL LAMP IN CIRCUIT WITH CAPACITOR INPUT TO FILTER

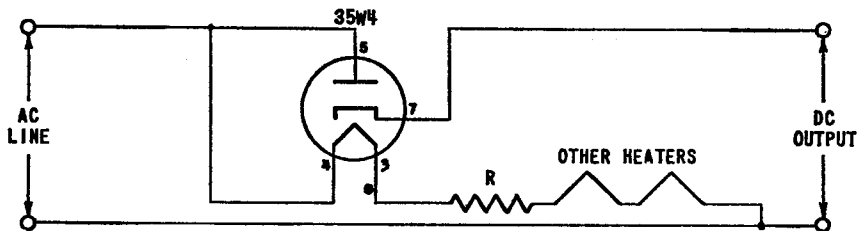
HEATER VOLTAGE	32	32	32	32	VOLTS
HEATER CURRENT	150	150	150	150	MA.
AC PLATE SUPPLY VOLTAGE	117	117	117	117	VOLTS
FILTER INPUT CAPACITOR	40	40	40	40	μF
MINIMUM TOTAL EFFECTIVE PLATE SUPPLY IMPEDANCE	15	15	15	15	OHMS
PANEL-LAMP SHUNTING RESISTOR	---	300	150	100	OHMS
DC OUTPUT CURRENT	60	70	80	90	MA.

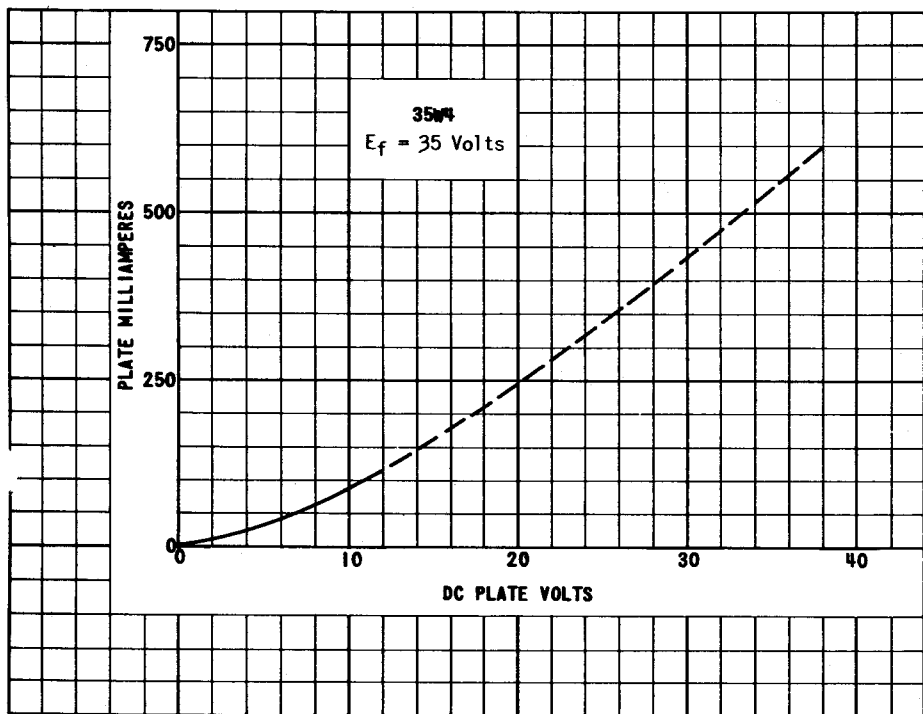
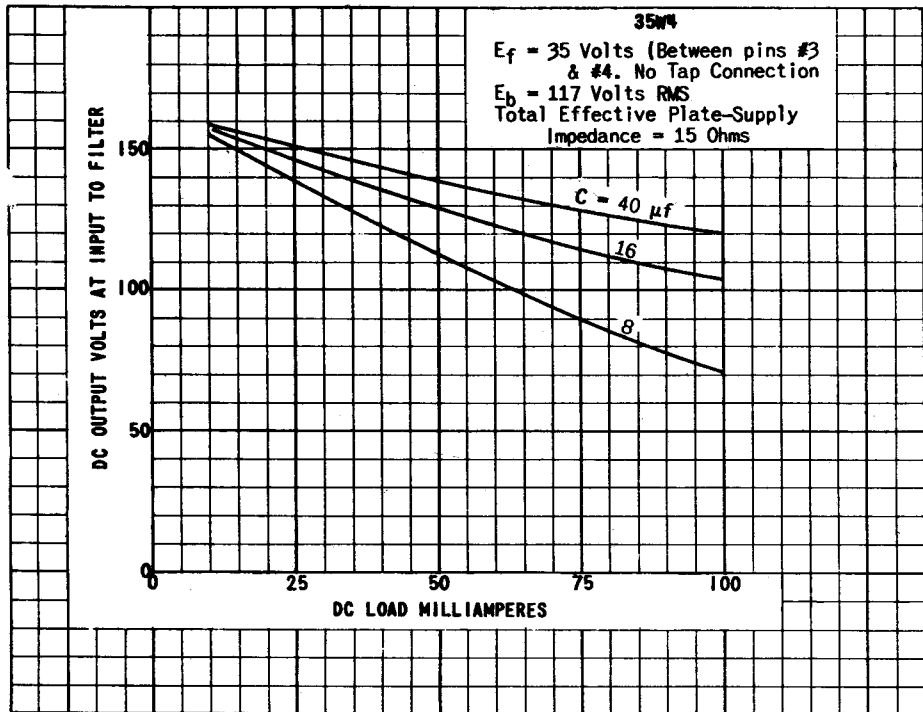


DROP ACROSS R AND ALL HEATERS (WITH PANEL LAMP) SHOULD EQUAL 117 VOLTS AT 0.15 AMPERE. R<sub>s</sub> = SHUNTING RESISTOR REQUIRED WHEN DC OUTPUT CURRENT EXCEEDS 60 MILLIAMPERES.

**HALF-WAVE RECTIFIER-CAPACITOR INPUT TO FILTER**  
 WITHOUT PANEL LAMP

HEATER VOLTAGE	35	VOLTS
HEATER CURRENT	150	MA.
AC PLATE SUPPLY VOLTAGE RMS	117	VOLTS
FILTER INPUT CAPACITOR	15	μf
MINIMUM TOTAL EFFECTIVE PLATE SUPPLY IMPEDANCE	15	OHMS
DC OUTPUT VOLTAGE AT INPUT TO FILTER (APPROX.)		
AT 50 MA. (HALF LOAD)	135	VOLTS
AT 100 MA. (FULL LOAD)	120	VOLTS
DC OUTPUT CURRENT	100	MA.
VOLTAGE REGULATION (APPROX.)		
FROM HALF-LOAD TO FULL LOAD	20	VOLTS





PRINTED IN U. S. A.

PLATE 2213  
 USE 3, 1949