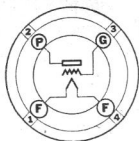


Sylvania

TYPE 50**POWER AMPLIFIER****CHARACTERISTICS**

Filament Voltage AC or DC	7.5 Volts
Filament Current	1.25 Amperes

Direct Interelectrode Capacitances:

Grid to Plate	8.4 $\mu\mu\text{f}$
Input	4.4 $\mu\mu\text{f}$
Output	2.7 $\mu\mu\text{f}$
Maximum Over-all Length	5 $\frac{3}{8}$ "
Maximum Diameter	2 $\frac{1}{8}$ "
Bulb	ST-16
Base—Medium 4-Pin	4-D

Operating Conditions and Characteristics:

Filament Voltage	7.5	7.5	7.5	7.5 Volts
Plate Voltage	300	350	400	450 Volts Max.
Grid Voltage*	-54	-63	-70	-84 Volts
Plate Current	35	45	55	55 Ma.
Plate Resistance	2000	1900	1800	1800 Ohms
Mutual Conductance	1900	2000	2100	2100 μmhos
Amplification Factor	3.8	3.8	3.8	3.8
Load Resistance	4600	4100	3670	4350 Ohms
Power Output	1.6	2.4	3.4	4.6 Watts

*Grid volts measured from mid-point of filament.

CIRCUIT APPLICATION

Sylvania 50 is a power output tube of the triode type designed to supply a large amount of undistorted power. Transformer coupling should be employed with this tube.

The coated filament of the 50 is designed to be operated from the a-c line through a step-down transformer. The filament voltage should be closely held to the rated value of 7.5 volts. Because of the high current all leads in the filament circuit must be of high current carrying capacity.

To prevent distortion and overloading, the proper negative grid bias should always be used with the 50. This bias is best obtained by means of the voltage drop through a resistor in the plate return lead. The proper value for a single tube and for two tubes in push-pull or parallel is shown in the following table:

Plate Voltage Volts	Grid Bias Voltage Volts	Plate Current Milliamperes	Resistor	
			Single Tube Ohms	Two Tubes Ohms
250	-45	28	1600	800
300	-54	35	1550	775
350	-63	45	1400	700
400	-70	55	1275	640
450	-84	55	1520	760

If increased power output is desired, two 50's may be employed in either parallel or push-pull.