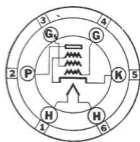


Sylvania
TYPE 18
POWER
AMPLIFIER



CHARACTERISTICS

Heater Voltage AC or DC	14.0 Volts
Heater Current	0.3 Ampere
Maximum Over-all Length.	4 $\frac{11}{8}$ "
Maximum Diameter	1 $\frac{13}{8}$ "
Bulb	ST-14
Base—Medium 6-Pin	6-B

Operating Conditions and Characteristics:

Heater Voltage	14.0 Volts
Plate Voltage	250 Volts
Grid Voltage	-16.5 Volts
Screen Voltage	250 Volts
Plate Current	34 Ma.
Screen Current	7.5 Ma.
Plate Resistance	79000 Ohms
Mutual Conductance	2350 μ mhos
Amplification Factor	185
Load Resistance	7000 Ohms*
Power Output	3.0 Watts

*A load resistance of 7000 ohms gives the same power output and percentage distortion as 9000 ohms.

CIRCUIT APPLICATION

Sylvania Type 18 is a cathode type output pentode similar in design and characteristics to Types 2A5 and 42 except for the heater rating. This type employs a 14 volt heater with a current rating of 0.3 ampere. Due to the similarity in design and construction, identical performance may be obtained from the 18 or the 42 when operated under similar conditions.

The 18 is an ideal tube for use in transformerless sets which use the 25Z5 as a voltage doubler. In such sets the heaters are connected in series. This operation is possible because the heater current rating of the 18, the 25Z5, and other suitable tubes is the same. Due to this fact, the necessity of using shunting resistors in any of the heater circuits is eliminated. The advantage of the higher heater voltages of the rectifier (25 volts) and the output tube (14 volts) is evident, since the heat dissipation in the fixed series resistor usually necessary in the heater circuit is reduced.

For a more detailed discussion on the application of the 18 refer to **Circuit Application** given on Type 42.