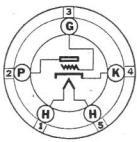


Sylvania

# TYPE 76

## SUPER TRIODE AMPLIFIER DETECTOR

### CHARACTERISTICS

| | |
|---|---|
| Heater Voltage AC or DC | 6.3 Volts |
| Heater Current | 0.3 Ampere |

**Direct Interelectrode Capacitances:**

| | |
|---|---|
| Grid to Plate | 2.8 μμf |
| Input | 3.5 μμf |
| Output | 2.5 μμf |
| Maximum Over-all Length | 4¼" |
| Maximum Diameter | 1⅝" |
| Bulb | ST-12 |
| Base—Medium 5-Pin | 5-A |

**Operating Conditions and Characteristics:**

CLASS A AMPLIFIER

| | | |
|---|---|---|
| Heater Voltage | 6.3 | 6.3 Volts |
| Plate Voltage | 100 | 250 Volts |
| Grid Voltage | −5 | −13.5 Volts |
| Plate Current | 2.5 | 5 Ma. |
| Plate Resistance | 12000 | 9500 Ohms |
| Mutual Conductance | 1150 | 1450 μmhos |
| Amplification Factor | 13.8 | 13.8 |

BIASED DETECTOR

| | | |
|---|---|---|
| Heater Voltage | 6.3 | 6.3 Volts |
| Plate Voltage | 100 | 250 Volts Max. |
| Grid Voltage | −8 | −20 Volts Approx. |

Plate Current—Adjust to 0.2 ma. with no a-c input signal.

GRID LEAK DETECTOR

| | |
|---|---|
| Heater Voltage | 6.3 Volts |
| Plate Voltage | 45 Volts |
| Grid Leak | 1 to 5 Megohms |
| Grid Condenser | 0.00025 μf |

### CIRCUIT APPLICATION

Sylvania Type 76 is a general purpose tube designed as a companion tube to the 77 and 78. In spite of the decreased heater current rating the characteristics and performance obtained from this tube are superior to Type 27. The 76 may be used to advantage in resistance coupled amplifiers because of the increased amplification factor. It is applicable either in r-f or a-f circuits.

The recommended operating conditions for service using transformer coupling are given under CHARACTERISTICS. For circuits utilizing resistance coupling, typical operating conditions are as follows:

| | |
|---|---|
| Plate Supply Voltage | 250 Volts |
| Grid Voltage | −9 Volts Approx. |
| Plate Load | 50,000 to 100,000 Ohms |
| Plate Current | 1 to 2 Ma. |

A grid coupling resistor in excess of 1.0 megohm should not be used.

This tube is also useful as the driver of a Class B power amplifier. Suggested operating conditions for this service are:

| | |
|---|---|
| Plate Voltage | 250 Volts |
| Grid Voltage | −13.5 Volts |

Plate Load—Approximately 4 times the plate resistance of the tube.

As a detector, Type 76 may be used as a biased detector or a grid leak detector. In general, grid leak detection is the more sensitive, but grid bias detection permits the handling of greater volume with high quality. For biased detector service, the grid bias may be conveniently obtained from the voltage drop in a resistor between cathode and ground. The value is not critical, 100,000 to 150,000 ohms being suitable. The higher value will permit the application of a larger input signal.

The 76 may also be employed as a two electrode detector, for which it is preferable to connect the plate to the cathode for the one electrode and utilize the grid for the other. A-C input voltages as high as 40 volts r-m-s may be applied between grid and cathode.

As an oscillator, Type 76 may be operated with a plate voltage of 90 volts and zero grid bias. In some applications a lower value of plate voltage may be found desirable.