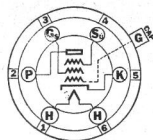


Sylvania

TYPE 6C6

TRIPLE GRID

AMPLIFIER



CHARACTERISTICS

Heater Voltage AC or DC	6.3 Volts
Heater Current	0.3 Ampere

Direct Interelectrode Capacitances:

Grid to Plate (with tube shield)	0.010 μ f Max.
Input	5.0 μ f
Output	6.5 μ f
Maximum Over-all Length	4 $\frac{1}{8}$ "
Maximum Diameter	1 $\frac{1}{8}$ "
Bulb	ST-12
Cap	Small Metal
Base—Small 6-Pin	6-F

Operating Conditions and Characteristics:

AMPLIFIER

	Triode	Pentode	
Heater Voltage	6.3	6.3	6.3 Volts
Plate Voltage	250	100	250 Max. Volts
Grid Voltage	-8	-3	-3 Volts
Screen Voltage	100	100 Max. Volts
Suppressor	Tie to Cathode	
Plate Current	6.5	2.0	2.0 Ma.
Screen Current	0.5	0.5 Ma.
Plate Resistance	0.01	1.0	1.5 Min. Megohms
Mutual Conductance	1900	1185	1225 μ mhos
Amplification Factor	20	1185	1500 Min.

Operating Conditions as Biased Detector:

DETECTOR

Heater Voltage	6.3	6.3 Volts
Plate Voltage	100	250 Volts Max.
Grid Voltage	-1.8	-4.3 Volts Approx.
Screen Voltage	30	100 Volts Max.

Plate Load—250,000 ohms or 500 h. choke shunted by 0.25 megohm. For resistance load, plate supply voltage will be voltage at plate plus voltage drop in load caused by specified plate current.

CIRCUIT APPLICATION

Sylvania 6C6 is an r-f pentode having a sharp plate current cut-off and is suitable for operation as a detector and amplifier in AC, AC-DC, DC, and automobile service. In this tube the suppressor is brought out to a separate base pin connection.

Biased Detector:

The 6C6 is particularly useful as a biased detector because of its ability to deliver a large audio-frequency output voltage with little distortion when a small radio-frequency signal is applied to the control grid, provided the coupling device is satisfactory.

Radio Frequency Amplifier:

Type 6C6 may be used satisfactorily in applications where the r-f signal applied to the grid is relatively low, that is, of the order of a few volts. In such cases either screen or control grid voltage (or both) may be varied to control the receiver volume. When larger signals are involved, a super-control amplifier tube should be employed to prevent the occurrence of excessive cross-modulation and modulation distortion.

The plate circuit load should be as high as is practicable. A tuned impedance load will be satisfactory for intermediate-frequency amplifiers operating at a fixed frequency. The gain per stage can be made as high as 200 or more with ordinary care in design. For other applications requiring uniform sensitivity over a wide band of radio frequencies, coupling devices to meet the specific requirements will be necessary.

Modulator or First Detector:

The 6C6 may be employed as a superheterodyne first detector but a tube having super-control characteristics is to be preferred if signals of large magnitude are to be received, and if supplementary volume control is to be obtained in this stage.