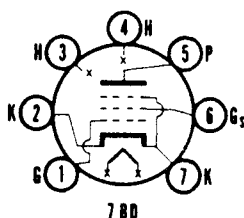




**SYLVANIA TYPE 6BC5  
3BC5  
4BC5**

**SHARP CUTOFF R F PENTODE**



**MECHANICAL DATA**

|                        |                        |
|------------------------|------------------------|
| Bulb.....              | T-5 1/2, Outline 5-2   |
| Base.....              | Miniature Button 7-Pin |
| Basing.....            | 7BD                    |
| Mounting Position..... | Any                    |

**ELECTRICAL DATA**

| HEATER CHARACTERISTICS                          | 3BC5 | 4BC5 | 6BC5      |
|-------------------------------------------------|------|------|-----------|
| Heater Voltage.....                             | 3.15 | 4.2  | 6.3 Volts |
| Heater Current.....                             | 600  | 450  | 300 Ma    |
| Heater Warm-up Time.....                        | 11   | 11   | Seconds   |
| Maximum Heater-Cathode Voltage                  |      |      |           |
| Total DC and Peak.....                          |      |      | 200 Volts |
| DC Heater Positive with respect to Cathode..... |      |      | 100 Volts |

# 6BC5, 3BC5, 4BC5 (Cont'd)

## DIRECT INTERELECTRODE CAPACITANCES

| Pentode Connected                                  | Shielded <sup>1</sup> | Unshielded               |
|----------------------------------------------------|-----------------------|--------------------------|
| Grid to Plate.....                                 | 0.020                 | 0.030 $\mu\text{mf}$ Max |
| Input.....                                         | 6.6                   | 6.5 $\mu\text{mf}$       |
| Output.....                                        | 2.6                   | 1.8 $\mu\text{mf}$       |
| <b>Triode Connected (Grid No. 2 Tied to Plate)</b> |                       |                          |
| Grid to Plate.....                                 | 2.5                   | 2.5 $\mu\text{mf}$       |
| Input.....                                         | 4.0                   | 3.9 $\mu\text{mf}$       |
| Output.....                                        | 4.3                   | 3.0 $\mu\text{mf}$       |

## MAXIMUM RATINGS (Design Center Values)

|                                  | Triode Connected <sup>2</sup> | Pentode Connected              |
|----------------------------------|-------------------------------|--------------------------------|
| Plate Voltage.....               | 300                           | 300 Volts                      |
| Plate Dissipation.....           | 2.5 <sup>3</sup>              | 2.0 Watts                      |
| Grid No. 2 Voltage.....          | Plate                         | See Rating Chart For Type 6AM8 |
| Grid No. 2 Supply Voltage.....   | Plate                         | 300 Volts                      |
| Grid No. 2 Dissipation.....      |                               | 0.5 Watts                      |
| Positive Grid No. 1 Voltage..... | 0                             | 0 Volts                        |

## CHARACTERISTICS AND TYPICAL OPERATION

### Class A<sub>1</sub> Amplifier—Pentode Connected

|                                                     |      |      |                       |
|-----------------------------------------------------|------|------|-----------------------|
| Plate Voltage.....                                  | 100  | 125  | 250 Volts             |
| Grid No. 2 Voltage.....                             | 100  | 125  | 150 Volts             |
| Cathode Resistor.....                               | 180  | 100  | 180 Ohms              |
| Transconductance.....                               | 4900 | 6100 | 5700 $\mu\text{mhos}$ |
| Plate Resistance (approx.).....                     | 0.6  | 0.5  | 0.8 Megohm            |
| Plate Current.....                                  | 4.7  | 8.0  | 7.5 Ma                |
| Grid No. 2 Current.....                             | 1.4  | 2.4  | 2.1 Ma                |
| Grid No. 1 Voltage for $I_b = 10 \mu\text{a}$ ..... | -5   | -6   | -8 Volts              |

### Triode Connected<sup>2</sup>

|                                 |      |                       |
|---------------------------------|------|-----------------------|
| Plate Voltage.....              | 250  | 180 Volts             |
| Cathode Resistor.....           | 820  | 330 Ohms              |
| Transconductance.....           | 4400 | 6000 $\mu\text{mhos}$ |
| Plate Resistance (approx.)..... | 9000 | 6000 Ohms             |
| Amplification Factor.....       | 40   | 42                    |
| Plate Current.....              | 6.0  | 8.0 Ma                |

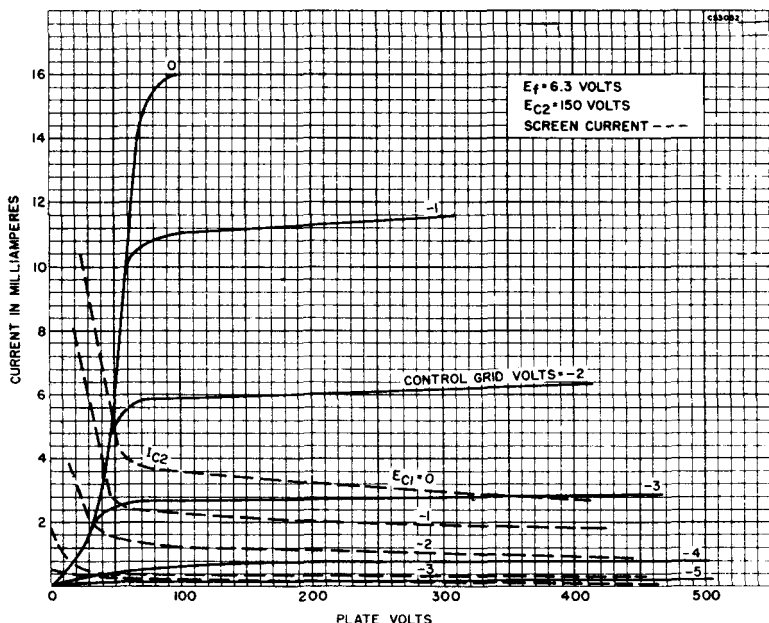
## NOTES:

1. External shield No. 316 connected to pin 7.
2. Screen grid tied to plate.
3. Total current flowing to plate and screen.

## APPLICATION

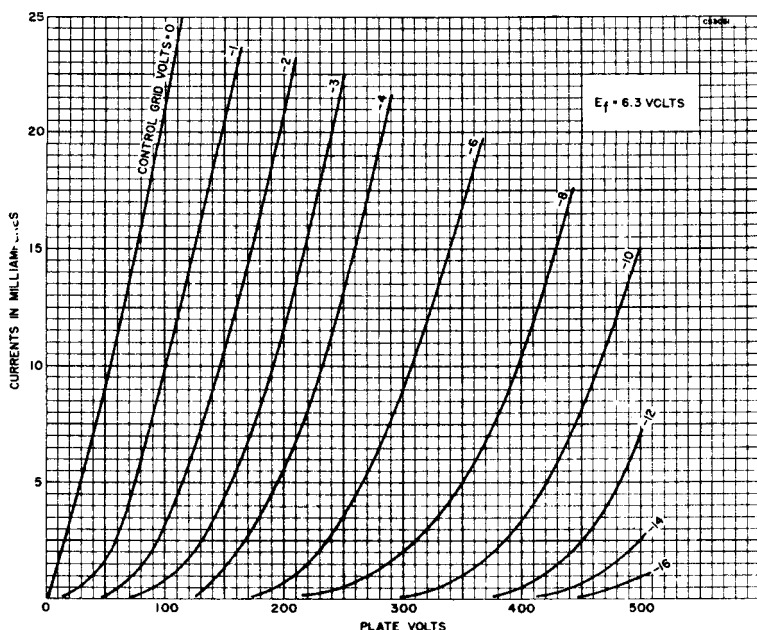
Sylvania Types 3BC5, 4BC5 and 6BC5 are sharp cutoff rf pentode amplifiers of miniature construction. They may be used at frequencies up to 400 mc and are particularly useful in television receivers where a slightly higher gain than that obtained with the similar Type 6AG5 is desired.

## AVERAGE PLATE CHARACTERISTICS



# 6BC5, 3BC5, 4BC5 (Cont'd)

## AVERAGE PLATE CHARACTERISTICS TRIODE CONNECTED



## AVERAGE TRANSFER CHARACTERISTICS

