

**6AC9**

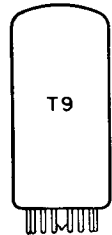
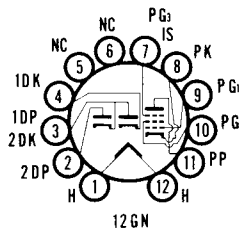
8AC9

Color Television Type

**IF AMPLIFIER  
PHASE DETECTOR**

**General Purpose Pentode  
and Double Diode**

Construction..... Compactron T-9  
 Base ..... Button 12 Pin, E12-70  
 Basing ..... 12GN  
 Outline ..... 9-57  
 Maximum Diameter ..... 1.188 In.  
 Maximum Seated Height ..... 1.750 In.  
 Maximum Overall Height ..... 2.125 In.



**ELECTRICAL DATA  
HEATER OPERATION**

|   | 8AC9<br>Series | 6AC9<br>Series | 6AC9<br>Parallel |
|---|----------------|----------------|------------------|
| Heater Voltage.....                     | 8.4            | 6.3            | 6.3 Volts        |
| Heater Current .....                    | 450            | 600            | 600 Ma           |
| Heater Warm-up Time .....               | 11             | 11             | — Seconds        |
| Maximum Heater-Cathode Voltage          |                |                |                  |
| Heater Negative with Respect to Cathode |                |                |                  |
| Total DC and Peak.....                  |                |                | 200 Volts        |
| Heater Positive with Respect to Cathode |                |                |                  |
| DC .....                                |                |                | 100 Volts        |
| Total DC and Peak.....                  |                |                | 200 Volts        |

**DIRECT INTERELECTRODE CAPACITANCES (Unshielded)**

| <b>Pentode Section</b>   |  |          |
|--|--|----------|
| Grid No. 1 to Plate (Max.).....  |  | 0.046 Pf |
| Input: P <sub>g1</sub> to (h, P <sub>k</sub> , P <sub>g2</sub> , P <sub>g3</sub> , and IS) ..... |  | 8.0 Pf   |
| Output: P <sub>p</sub> to (h, P <sub>k</sub> , P <sub>g2</sub> , P <sub>g3</sub> , and IS) ..... |  | 2.2 Pf   |
| <b>Diode Section</b>   |  |          |
| No. 2 Plate to No. 1 Plate and No. 2 Cathode.....  |  | 1.8 Pf   |
| No. 1 Cathode to No. 1 Plate and No. 2 Cathode .....   |  | 1.6 Pf   |
| No. 2 Plate to Heater, Pentode Grid No. 3 and Internal Shield.....                               |  | 0.52 Pf  |
| No. 1 Cathode to Heater, Pentode Grid No. 3 and Internal Shield.....                             |  | 3.2 Pf   |
| <b>Coupling</b>  |  |          |
| No. 2 Diode Plate to Pentode Plate .....   |  | 0.050 Pf |
| No. 2 Diode Plate to Pentode Grid No. 1 .....  |  | 0.002 Pf |
| No. 1 Diode Plate and No. 2 Diode Cathode to Pentode Plate .....                                 |  | 0.048 Pf |
| No. 1 Diode Plate and No. 2 Diode Cathode to Pentode Grid No. 1 .....                            |  | 0.002 Pf |
| No. 1 Diode Cathode to Pentode Plate .....   |  | 0.004 Pf |

**RATINGS (Design Maximum Rating System)**

| <b>Pentode Section</b>                 |                                    |           |
|--|------------------------------------|-----------|
| Plate Voltage (Max.) .....             |                                    | 330 Volts |
| Grid No. 2 Supply Voltage (Max.) ..... |                                    | 330 Volts |
| Grid No. 2 Voltage .....               | See Rating Chart (Gen. Info. Sec.) |           |

|  |             |
|--|-------------|
| Positive Grid No. 1 Voltage (Max.) ..... | 0 Volt      |
| Plate Dissipation (Max.) .....           | 2.5 Watts   |
| Grid No. 2 Dissipation (Max.) .....      | 0.55 Watt   |
| Grid No. 1 Circuit Resistance            |             |
| Self Bias (Max.) .....                   | 1.0 Megohm  |
| Fixed Bias (Max.) .....                  | 0.25 Megohm |

**Diode Section (Each Diode)**

|                                      |        |
|--------------------------------------|--------|
| Continuous Diode Current (Max.)..... | 5.0 Ma |
|--------------------------------------|--------|

**CHARACTERISTICS AND TYPICAL OPERATION**

**Pentode Section**

|   |                   |
|---|-------------------|
| Plate Voltage .....                                     | 125 Volts         |
| Grid No. 2 Voltage .....                                | 125 Volts         |
| Grid No. 1 Voltage .....                                | -1 Volt           |
| Plate Current .....                                     | 12 Ma             |
| Grid No. 2 Current .....                                | 4.5 Ma            |
| Transconductance .....                                  | 10,000 $\mu$ mhos |
| Plate Resistance (Approx.) .....                        | 150,000 Ohms      |
| Grid No. 1 Voltage for $I_b = 20 \mu$ a (Approx.) ..... | -7 Volts          |

**Diode Section (Each Diode)**

|   |          |
|---|----------|
| Tube Voltage Drop for $I_b = 50$ Ma ..... | 10 Volts |
|---|----------|

**AVERAGE PLATE CHARACTERISTICS**

