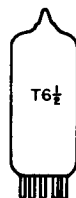
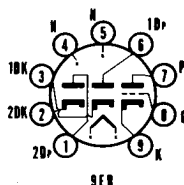


**6BN8****8BN8**

Color Television Type

**PHASE/RATIO DETECTOR  
OR DISCRIMINATOR  
AF/BURST AMPLIFIER OR OSCILLATOR****Double Diode and High Mu Triode**

Construction ..... Miniature T-6½  
 Base ..... Button 9 Pin, E9-1  
 Basing ..... 9ER  
 Outline ..... 6-3  
     Maximum Diameter ..... 0.875 In.  
     Maximum Seated Height ..... 2.375 In.  
     Maximum Overall Height ..... 2.625 In.

**ELECTRICAL DATA  
HEATER OPERATION**

|                                         | <b>8BN8</b> | <b>6BN8</b> |
|-----------------------------------------|-------------|-------------|
| Heater Voltage.....                     | 8.4         | 6.3 Volts   |
| Heater Current.....                     | 450         | 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)****Triode**

|                            |         |
|----------------------------|---------|
| Grid to Plate.....         | 2.5 Pf  |
| Input: g to (h + Tk).....  | 3.6 Pf  |
| Output: p to (h + Tk)..... | 0.25 Pf |

**Diodes**

|                                                        |        |
|--------------------------------------------------------|--------|
| No. 1 Diode Plate to No. 1 Diode Cathode + Heater..... | 1.9 Pf |
| No. 2 Diode Plate to No. 2 Diode Cathode + Heater..... | 1.9 Pf |
| No. 1 Diode Cathode to No. 1 Diode Plate + Heater..... | 4.8 Pf |
| No. 2 Diode Cathode to No. 2 Diode Plate + Heater..... | 4.8 Pf |

**Coupling**

|                                                    |          |
|----------------------------------------------------|----------|
| No. 1 Diode Plate to Triode Grid (Max.).....       | 0.060 Pf |
| No. 2 Diode Plate to Triode Grid (Max.).....       | 0.10 Pf  |
| No. 1 Diode Cathode to All:                        |          |
| 1Dk to (h + Tk + 2Dk + Tp + 1Dp + Tg + 2Dp).....   | 5.0 Pf   |
| No. 2 Diode Cathode to All:                        |          |
| 2 Dk to (h + Tk + 1Dk + Tp + 1Dp + 2Dp + Tg).....  | 5.0 Pf   |
| No. 1 Diode Plate to No. 2 Diode Plate (Max.)..... | 0.070 Pf |
| No. 1 Diode Plate to All:                          |          |
| 1DP to (h + Tk + 1Dk + 2Dk + Tp + 2Dp + Tg).....   | 3.0 Pf   |
| No. 2 Diode Plate to All:                          |          |
| 2DP to (h + Tk + 1Dk + 2Dk + Tp + 1Dp + Tg).....   | 3.0 Pf   |

**RATINGS (Design Maximum Rating System)****Triode Section**

|                                      |            |
|--------------------------------------|------------|
| Plate Voltage (Max.).....            | 330 Volts  |
| Positive DC Grid Voltage (Max.)..... | 0 Volt     |
| Plate Dissipation (Max.).....        | 1.7 Watts  |
| Grid Circuit Resistance (Max.).....  | 1.0 Megohm |

**Diode Section**

|                                             |       |
|---------------------------------------------|-------|
| Peak Plate Current (Each Plate) (Max.)..... | 54 Ma |
| DC Current (Each Plate) (Max.).....         | 9 Ma  |

**CHARACTERISTICS AND TYPICAL OPERATION****Triode Section, Class A1 Amplifier**

|                                            |        |             |
|--------------------------------------------|--------|-------------|
| Plate Voltage.....                         | 100    | 250 Volts   |
| Grid Voltage.....                          | -1     | -3 Volts    |
| Plate Current.....                         | 1.5    | 1.6 Ma      |
| Transconductance.....                      | 3500   | 2500 μmhos  |
| Amplification Factor.....                  | 75     | 70          |
| Plate Resistance (Approx.).....            | 21,000 | 28,000 Ohms |
| Grid Voltage (Approx.) for Ib = 10 μa..... | -2.5   | -5.5 Volts  |

**Diode Section**

|                                                                |           |
|----------------------------------------------------------------|-----------|
| Average Current Each Plate at 10 Volts DC <sup>(1)</sup> ..... | 50 Ma     |
| Voltage Drop Each Section at Ib = 9 Ma DC.....                 | 2.6 Volts |

**NOTE:**

(1) Test conditions only.