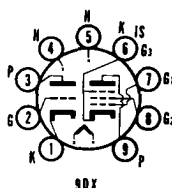
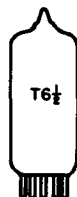


**6KS8****8KS8****SYNC SEPARATOR (T)  
VIDEO AMPLIFIER (P)****High Mu Triode and  
Semi-Remote Cutoff Pentode**

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



9DX

**ELECTRICAL DATA  
HEATER OPERATION**

|                                         | <b>6KS8</b> | <b>8KS8</b> |
|-----------------------------------------|-------------|-------------|
| Heater Voltage .....                    | 8.4         | 6.3 Volts   |
| Heater Current .....                    | 450         | 600 Ma      |
| Heater Warm-up Time .....               | 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**

|                                                 | <b>Shielded <sup>(1)</sup></b> | <b>Unshielded</b> |
|-------------------------------------------------|--------------------------------|-------------------|
| <b>Triode Section</b>                           |                                |                   |
| Grid to Plate .....                             | 2.2                            | 2.2 Pf            |
| Input: g to (h + Tk + Pk, g3, IS) .....         | 3.4                            | 3.2 Pf            |
| Output: p to (h + Tk + Pk, g3, IS) .....        | 3.0                            | 1.8 Pf            |
| <b>Pentode Section</b>                          |                                |                   |
| Grid No. 1 to Plate (Max.) .....                | 0.04                           | 0.05 Pf           |
| Input: g1 to (h + Tk + Pk, g3, IS + g2) .....   | 10                             | 10 Pf             |
| Output: p to (h + Tk + Pk, g3, IS + g2) .....   | 4.5                            | 3.6 Pf            |
| <b>Coupling</b>                                 |                                |                   |
| Pentode Plate to Triode Plate (Max.) .....      | 0.025                          | 0.150 Pf          |
| Pentode Grid No. 1 to Triode Plate (Max.) ..... | 0.005                          | 0.008 Pf          |

**RATINGS (Design Maximum Rating System)**

|                                          | <b>Triode<br/>Section</b>          | <b>Pentode<br/>Section</b> |
|------------------------------------------|------------------------------------|----------------------------|
| Plate Voltage (Max.) .....               | 330                                | 330 Volts                  |
| Grid No. 2 Supply Voltage (Max.) .....   | —                                  | 330 Volts                  |
| Grid No. 2 Voltage .....                 | See Rating Chart (Gen. Info. Sec.) |                            |
| Plate Dissipation (Max.) .....           | 1.1                                | 3.75 Watts                 |
| Grid No. 2 Dissipation (Max.) .....      | —                                  | 1.1 Watt                   |
| Positive Grid No. 1 Voltage (Max.) ..... | 0                                  | 0 Volt                     |
| Grid No. 1 Circuit Resistance            |                                    |                            |
| Fixed Bias (Max.) .....                  | 0.5                                | 0.25 Megohm                |
| Self Bias (Max.) .....                   | 1.0                                | 1.0 Megohm                 |

Control grid to cathode spacing of the pentode section is of such low order of magnitude as to preclude the use of voltage between these elements of more than 100 volts DC and Peak AC in commercial tube checkers and shorts indicating devices, particularly where mechanical excitation of the tube is employed.

**CHARACTERISTICS AND TYPICAL OPERATION**

|                                                                  | <b>Triode<br/>Section</b> | <b>Pentode<br/>Section</b> |
|------------------------------------------------------------------|---------------------------|----------------------------|
| <b>Class A1 Amplifier</b>                                        |                           |                            |
| Plate Voltage .....                                              | 200                       | 150 Volts                  |
| Grid No. 2 Voltage .....                                         | —                         | 150 Volts                  |
| Grid No. 1 Voltage .....                                         | —2                        | 0 Volts                    |
| Cathode Bias Resistor .....                                      | —                         | 150 Ohms                   |
| Plate Current .....                                              | 4.0                       | 20 Ma                      |
| Grid No. 2 Current .....                                         | —                         | 4.5 Ma                     |
| Transconductance .....                                           | 4000                      | 9500 $\mu$ mhos            |
| Amplification Factor .....                                       | 70                        | —                          |
| Plate Resistance (Approx.) .....                                 | 17,500                    | 150,000 Ohms               |
| E <sub>c1</sub> for I <sub>b</sub> = 100 $\mu$ a (Approx.) ..... | —                         | —10 Volts                  |
| E <sub>c1</sub> for I <sub>b</sub> = 20 $\mu$ a (Approx.) .....  | —5                        | — Volts                    |

**PLATE KNEE CHARACTERISTICS**

$E_b = 65$  V,  $E_{c2} = 150$  V,  $E_{c1} = 0$  and  $I_b = 60$  Ma,  $I_{c2} = 20$  Ma

**NOTE:**

(1) External shield No. 315 connected to Pins 4 and 5.

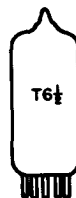
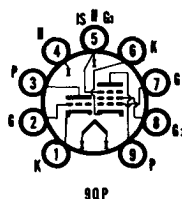
Color Television Type

# **SYNC SEP. or VOLTAGE AMP. (T) IF AMPLIFIER (P)**

# **6KT8**

**High Mu Triode and High Gm Pentode**

Construction ..... Miniature T-6½  
Base ..... Button 9 Pin, E9-1  
Basing<sup>(2)</sup> ..... 9QP  
Outline ..... 6-2  
Maximum Diameter ..... 0.875 In.  
Maximum Seated Height ..... 1.937 In.  
Maximum Overall Height ..... 2.187 In.

**ELECTRICAL DATA****HEATER OPERATION**

|                                         |           |
|-----------------------------------------|-----------|
| Heater Voltage.....                     | 6.3 Volts |
| Heater Current.....                     | 600 Ma    |
| 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**

|                                                | Shielded <sup>(1)</sup> | Unshielded |
|------------------------------------------------|-------------------------|------------|
| <b>Triode Section</b>                          |                         |            |
| Grid to Plate.....                             | 3.0                     | 3.0 Pf     |
| Input: g to (h + Pg3, IS + k).....             | 3.2                     | 3.2 Pf     |
| Output: p to (h + Pg3, IS + k).....            | 2.4                     | 1.6 Pf     |
| <b>Pentode Section</b>                         |                         |            |
| Grid No. 1 to Plate (Max.).....                | 0.03                    | 0.03 Pf    |
| Input: g1 to (h, g3, IS + g2 + k).....         | 7.5                     | 7.5 Pf     |
| Output: p to (h, g3, IS + g2 + k).....         | 2.8                     | 2.2 Pf     |
| <b>Coupling</b>                                |                         |            |
| Triode Grid to Pentode Plate (Max.).....       | 0.003                   | 0.018 Pf   |
| Pentode Grid No. 1 to Triode Plate (Max.)..... | 0.002                   | 0.006 Pf   |

**RATINGS (Design Maximum Rating System)**

|                                         | Triode Section                     | Pentode Section |
|-----------------------------------------|------------------------------------|-----------------|
| Plate Voltage (Max.).....               | 330                                | 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                                  | 0 Volt          |
| Plate Dissipation (Max.).....           | 1.0                                | 2.5 Watts       |
| Grid No. 2 Dissipation (Max.).....      | —                                  | 0.55 Watts      |
| Grid No. 1 Circuit Resistance           |                                    |                 |
| Fixed Bias (Max.).....                  | 0.5                                | 0.25 Megohm     |
| Cathode Bias (Max.).....                | 1.0                                | 1.0 Megohm      |

**CHARACTERISTICS AND TYPICAL OPERATION**

|                                                | Triode Section | Pentode Section   |
|------------------------------------------------|----------------|-------------------|
| Plate Voltage.....                             | 250            | 125 Volts         |
| Grid No. 2 Voltage.....                        | —              | 125 Volts         |
| Grid No. 1 Voltage.....                        | -2             | -1 Volts          |
| Plate Current.....                             | 1.8            | 12 Ma             |
| Grid No. 2 Current.....                        | —              | 4.5 Ma            |
| Transconductance.....                          | 3200           | 10,000 $\mu$ mhos |
| Amplification Factor.....                      | 100            | —                 |
| Plate Resistance (Approx.).....                | 31,500         | 150,000 Ohms      |
| $E_{c1}$ for $I_b = 20$ $\mu$ a (Approx.)..... | -3.5           | -7 Volts          |

**NOTES:**

- (1) External Shield No. 315 connected to Pins 4 and 5.
- (2) Due to the unique element connections, this tube is designed that Pin No. 5 be operated at or near ground potential. Pentode section Grid No. 3, Internal Shield and one side of the heater all connect to Pin No. 5. Should instantaneous total cathode to Grid No. 3 voltage exceed + 20 Volts, undesirable changes in tube characteristics may result.