

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

|                                         | 11AR11 | 8AR11 | 6AR11     |
|-----------------------------------------|--------|-------|-----------|
| Heater Voltage.....                     | 11.2   | 8.4   | 6.3 Volts |
| Heater Current .....                    | 450    | 600   | 800 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 (Shielded)<sup>(1)</sup>**

**Section 1**

|                                              |          |
|----------------------------------------------|----------|
| Grid-Number 1 to Plate .....                 | 0.026 Pf |
| Input: 1g1 to (1k + 1g2 + 1g3 + h + IS)..... | 10 Pf    |
| Output: 1p to (1k + 1g2 + 1g3 + h + IS)..... | 2.8 Pf   |

**Section 2**

|                                                            |          |
|------------------------------------------------------------|----------|
| Grid-Number 1 to Plate .....                               | 0.026 Pf |
| Input: 2g1 to (2k + 2g2 + 2g3 + 1g3 + h + IS) .....        | 10 Pf    |
| Output: 2p to (2k + 2g2 + 2g3 + 1g3 + h + IS) .....        | 3.0 Pf   |
| Plate to Plate (Max.).....                                 | 0.016 Pf |
| Grid-Number 1, Section 1 to Plate, Section 2:(Max.) .....  | 0.002 Pf |
| Grid-Number 1, Section 2 to Plate, Section 1: (Max.) ..... | 0.004 Pf |

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

|                                             |                                    |
|---------------------------------------------|------------------------------------|
| Plate Voltage (Max.) .....                  | 330 Volts                          |
| Suppressor Voltage (Max.).....              | 0 Volt                             |
| Screen-Supply Voltage (Max.) .....          | 330 Volts                          |
| Screen Voltage.....                         | See Rating Chart (Gen. Info. Sec.) |
| Positive DC Grid No. 1 Voltage (Max.) ..... | 0 Volt                             |
| Plate Dissipation (Max.) .....              | 3.1 Watts                          |
| Screen Dissipation (Max.) .....             | 0.65 Watt                          |

**CHARACTERISTICS AND TYPICAL OPERATION (Each Section)**

|                                    |                                |
|------------------------------------|--------------------------------|
| Plate Voltage .....                | 125 Volts                      |
| Suppressor .....                   | Connected to Cathode at Socket |
| Screen Voltage.....                | 125 Volts                      |
| Cathode-Bias Resistor .....        | 56 Ohms                        |
| Plate Resistance (Approx.) .....   | 0.2 Megohms                    |
| Transconductance .....             | 10,500 $\mu$ mhos              |
| Plate Current .....                | 11 Ma                          |
| Screen Current .....               | 3.5 Ma                         |
| Grid No. 1 Voltage (Approx.) ..... |                                |
| Gm = 50 $\mu$ mhos .....           | -15 Volts                      |

**NOTE:**

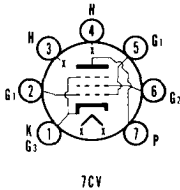
(1) With external shield (EIA 309) connected to cathode of section under test.

**6AS5**

**AUDIO POWER AMPLIFIER**

**Beam Pentode**

|                              |                |
|------------------------------|----------------|
| Construction .....           | Miniature T-5½ |
| Base .....                   | Button 7 Pin   |
| Biasing .....                | 7CV            |
| Outline .....                | 5-3            |
| Maximum Diameter .....       | 0.750 In.      |
| Maximum Seated Height .....  | 2.375 In.      |
| Maximum Overall Height ..... | 2.625 In.      |



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

|                                      |           |
|--------------------------------------|-----------|
| Heater Voltage.....                  | 6.3 Volts |
| Heater Current .....                 | 800 Ma    |
| Maximum Heater-Cathode Voltage ..... | 100 Volts |

**DIRECT INTERELECTRODE CAPACITANCES**

|                     |        |
|---------------------|--------|
| Grid to Plate ..... | 0.6 Pf |
| Input .....         | 12 Pf  |
| Output .....        | 9.0 Pf |

**RATINGS (Design Center Rating System)**

|                               |            |
|-------------------------------|------------|
| Plate Voltage (Max.)          | 150 Volts  |
| Grid No. 2 Voltage (Max.)     | 117 Volts  |
| Plate Dissipation (Max.)      | 5.5 Watts  |
| Grid No. 2 Dissipation (Max.) | 1.0 Watt   |
| Grid No. 1 Circuit Resistance |            |
| Fixed Bias (Max.)             | 0.1 Megohm |
| Cathode Bias (Max.)           | 0.5 Megohm |

**CHARACTERISTICS AND TYPICAL OPERATION****Class A1 Amplifier**

|                                     |                 |
|-------------------------------------|-----------------|
| Plate Voltage                       | 150 Volts       |
| Grid No. 2 Voltage                  | 110 Volts       |
| Grid No. 1 Voltage                  | 8.5 Volts       |
| Peak AF Grid No. 1 Voltage          | 8.5 Volts       |
| Plate Current (Zero Signal)         | 35 Ma           |
| Plate Current (Maximum Signal)      | 36 Ma           |
| Grid No. 2 Current (Zero Signal)    | 2 Ma            |
| Grid No. 2 Current (Maximum Signal) | 6.5 Ma          |
| Transconductance                    | 5600 $\mu$ mhos |
| Load Resistance                     | 4500 Ohms       |
| Total Harmonic Distortion           | 10 Percent      |
| Maximum Signal Power Output         | 2.2 Watts       |

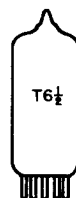
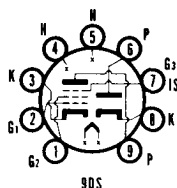
Color Television Type

**AUDIO/VIDEO DETECTOR or DC  
RESTORER (D) IF/VIDEO/AGC  
AMPLIFIER (P)**
**6AS8**

5AS8

**High Perveance Diode and  
Sharp Cutoff Pentode**

|                        |                    |
|------------------------|--------------------|
| Construction           | Miniature T-6½     |
| Base                   | Button 9 Pin, E9-1 |
| Basing                 | 9DS                |
| Outline                | 6-2                |
| Maximum Diameter       | 0.875 In.          |
| Maximum Seated Height  | 1.937 In.          |
| Maximum Overall Height | 2.187 In.          |

**ELECTRICAL DATA  
HEATER OPERATION**

|                                         | <b>5AS8<br/>Series</b> | <b>6AS8<br/>Parallel</b> |
|-----------------------------------------|------------------------|--------------------------|
| Heater Voltage                          | 4.7                    | 6.3 Volts                |
| Heater Current                          | 600                    | 450 Ma                   |
| Heater Warm-up Time                     | 11                     | — Seconds                |
| Maximum Heater-Cathode Voltage          |                        |                          |
| Heater Negative With Respect to Cathode |                        | 200 Volts                |
| Total DC and Peak                       |                        |                          |
| Heater Positive With Respect to Cathode |                        | 100 Volts                |
| DC                                      |                        | 200 Volts                |
| Total DC and Peak                       |                        |                          |

**DIRECT INTERELECTRODE CAPACITANCES (Unshielded)****Pentode Section**

|                                |         |
|--------------------------------|---------|
| Grid No. 1 to Plate (Max.)     | 0.03 Pf |
| Input: g1 to (h + k + g2 + g3) | 7.0 Pf  |
| Output: p to (h + k + g2 + g3) | 2.4 Pf  |

**Coupling**

|                                       |          |
|---------------------------------------|----------|
| Pentode Grid to Diode Plate (Max.)    | 0.005 Pf |
| Pentode Plate to Diode Cathode (Max.) | 0.15 Pf  |
| Pentode Plate to Diode Plate (Max.)   | 0.10 Pf  |

**Diode Section**

|                                              |        |
|----------------------------------------------|--------|
| Plate to Heater, Cathode and Internal Shield | 3.0 Pf |
|----------------------------------------------|--------|

**RATINGS (Design Center Rating System)****Pentode Section**

|                                    |                                    |
|------------------------------------|------------------------------------|
| Plate Voltage (Max.)               | 300 Volts                          |
| Plate Dissipation (Max.)           | 2.5 Watts                          |
| Grid No. 2 Voltage                 | See Rating Chart (Gen. Info. Sec.) |
| Grid No. 2 Supply Voltage (Max.)   | 300 Volts                          |
| Grid No. 2 Dissipation (Max.)      | 0.5 Watt                           |
| Positive Grid No. 1 Voltage (Max.) | 0 Volt                             |
| Grid No. 3 Voltage (Max.)          | 0 Volt                             |