

**MAZDA**

6.F.13

**HIGH SLOPE SCREENED R.F. PENTODE***Indirectly heated - for parallel operation***RATING**

|                                                |                |        |
|------------------------------------------------|----------------|--------|
| Heater Voltage (volts)                         | $V_h$          | 6.3    |
| Heater Current (amps)                          | $I_h$          | 0.35   |
| Maximum Anode Voltage (volts)                  | $V_a$          | 250    |
| Maximum Screen Voltage (volts)                 | $V_{g2}$       | 250    |
| Mutual Conductance (mA/V)                      | $S_m$          | \$ 9.0 |
| Maximum Anode Dissipation (watts)              | $P_a$          | † 3.5  |
| Maximum Screen Dissipation (watts)             | $P_{g2}$       | † 1.0  |
| Maximum Potential Heater/Cathode<br>(volts DC) | $V_{h-k(max)}$ | 150    |

\$ Taken at  $V_a = V_{g2} = 200v$ ;  $V_{g1} = -1.8v$ .

† With grid cathode resistance not exceeding 10,000 ohms.

**INTER-ELECTRODE CAPACITANCES**

|                                |           | $q$ | +    | [    |
|--------------------------------|-----------|-----|------|------|
| Anode/Earth ( $\mu F$ )        | $C_{out}$ | 4.4 | 5.9  | -    |
| Anode/Control Grid ( $\mu F$ ) | $C_{a,g}$ | -   | .007 | .006 |
| Control Grid/Earth ( $\mu F$ ) | $C_{in}$  | 9.5 | 11.0 | -    |

$q$  Inter-Electrode capacitances with holder capacitance balanced out.

† Total capacitances including Benjamin BSA moulded holder measured at 1 Mc/s.

[ Total capacitances including Benjamin BSA moulded holder measured at 1 Mc/s but with extra perpendicular shield.

**DIMENSIONS**

|                               |       |
|-------------------------------|-------|
| Maximum Overall Length (mm)   | 67    |
| Maximum Diameter (mm)         | 22    |
| Maximum Seated Height (mm)    | 54    |
| Radius over Location Key (mm) | 12.25 |

**MOUNTING POSITION** - Unrestricted.

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#### TYPICAL OPERATION

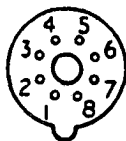
|                                                                                            |                    |        |      |       |       |
|--------------------------------------------------------------------------------------------|--------------------|--------|------|-------|-------|
| Anode Voltage (volts)                                                                      | $V_a$              | -      | 200  | 190   | 208   |
| Screen Voltage (volts)                                                                     | $V_{g2}$           | 220 ‡  | 200  | 190   | 208   |
| Grid Bias Voltage (volts -ve)                                                              | $V_{g1}$           | 1.45   | 1.8  | 1.55  | 1.9   |
| Anode Current (mA)                                                                         | $I_a$              | 17.0 ‡ | 10.0 | 10.3  | 10.15 |
| Screen Current (mA)                                                                        | $I_{g2}$           | 4.5 ‡  | 2.60 | 2.7   | 2.65  |
| Mutual Conductance (mA/V)                                                                  | $S_m$              |        | 9.0  | 9.25  | 8.95  |
| Input Capacity Working ( $\mu\text{pF}$ )                                                  | $C_{in(w)}$        |        | 12.6 | 12.75 | 12.6  |
| Change in input capacity produced by biasing valve to 1 $\mu\text{A/V}$ ( $\mu\text{pF}$ ) | $\Delta C_{in(w)}$ | -      | 2.75 | 2.9   | 2.7   |
| Self Bias Resistance (ohms)                                                                | $R_{k,E}$          | 68     | -    | 120   | 150   |
| Input Loss at 45 Mc/s (ohms)                                                               | $r_{gl,k(w)}$      | -      | 4800 | 4500  | 4900  |
| Equivalent grid noise resistance (ohms)                                                    | $r_{eq}$           |        | 780  | 750   | 790   |

‡ Maximum permissible rating D.C. connected as Video Output Valve.

\* Inter-Electrode capacitance with holder capacitance balanced out.

BULB Clear

BASE B8A



Viewed from free end of pins.

#### CONNEXIONS

|       |                 |    |
|-------|-----------------|----|
| Pin 1 | Heater          | h  |
| Pin 2 | Anode           | a  |
| Pin 3 | Internal Screen | s  |
| Pin 4 | Suppressor Grid | g3 |
| Pin 5 | Screen Grid     | g2 |
| Pin 6 | Control Grid    | g1 |
| Pin 7 | Cathode         | k  |
| Pin 8 | Heater          | h  |

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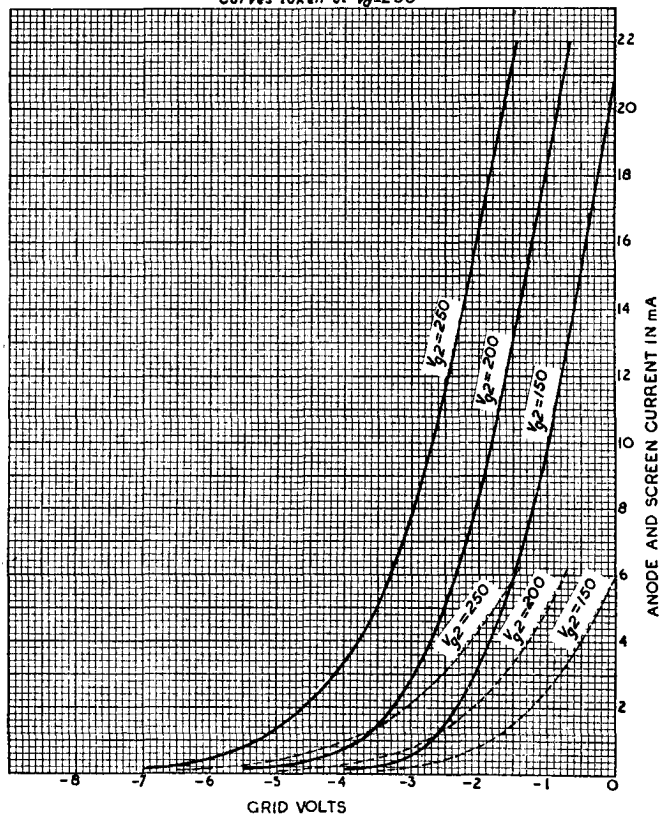
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**AVERAGE CHARACTERISTIC CURVES**

*Curves taken at  $V_g = 250$*



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**AVERAGE CHARACTERISTIC CURVES**

*Curves taken at  $V_b = 250$*

