

# MAZDA

10.LD.3

## DOUBLE DIODE TRIODE

Indirectly heated—for series operation

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### RATING

|                                              |                    |          |
|----------------------------------------------|--------------------|----------|
| Heater Current (amps)                        | $I_h$              | 0.1      |
| Heater Voltage (volts)                       | $V_h$              | 14       |
| Maximum Anode Voltage (volts)                | $V_a(\max)$        | 250      |
| Maximum Cathode Current (mA)                 | $I_{k(av)}\max$    | 5        |
| Mutual Conductance (mA/V)                    | $g_m$              | • 1.4    |
| Anode Impedance (ohms)                       | $r_a$              | • 50,000 |
| Amplification Factor                         | $\mu$              | • 70     |
| Maximum Mean Diode Current per Diode (mA)    | $I_{a(d)av}(\max)$ | 0.8      |
| Maximum Potential Heater/Cathode (volts RMS) | $V_{h-k}(\max)$    | •• 150   |
| Maximum Anode Dissipation (watts)            | $P_a(\max)$        | 1.0      |

- Taken at  $V_a = 100V$ ;  $V_g = -1$
- Measured with respect to the higher potential heater pin.

### INTER-ELECTRODE CAPACITANCES

|                 | $\mu F$            | $\mu F$ | $\mu F$ |
|-----------------|--------------------|---------|---------|
| Anode/Earth     | $C_{out}(t)$       | 1.9     | 3.2     |
| Anode/Grid      | $C_{ag}$           | 1.3     | 1.5     |
| Grid/Earth      | $C_{in}(t)$        | 3.0     | 4.3     |
| Grid/Diode 1    | $C_{g,a'(d)}$      | 0.007   | 0.009   |
| Grid/Diode 2    | $C_{g,a''(d)}$     | 0.03    | 0.04    |
| Diode 1/Earth   | $C_{in(a'd)}$      | 1.2     | 2.5     |
| Diode 1/Diode 2 | $C_{a'(d),a''(d)}$ | 0.3     | 0.5     |
| Diode 2/Earth   | $C_{in(a''d)}$     | 1.1     | 2.4     |
| Anode/Diode 1   | $C_{a,a'(d)}$      | 0.01    | 0.011   |
| Anode/Diode 2   | $C_{a,a''(d)}$     | 0.01    | 0.011   |

• Inter-electrode capacitances with holder capacitance balanced out.

\$ These capacitances include a Benjamin B.8.A. holder measured at a frequency of 1 Mc/s.

"Earth" denotes electrodes of any second valve section and the remaining earthy potential electrodes of the section under measurement, heater and shields joined to cathode.

### DIMENSIONS

|                           |       |       |
|---------------------------|-------|-------|
| Maximum Overall Length    | (mm)  | 60    |
| Maximum Diameter          | (mm)  | 22    |
| Maximum Seated Height     | (mm)  | 53    |
| Radius Over Location Key  | (mm)  | 12.25 |
| Approximate Nett Weight   | (ozs) | 1     |
| Approximate Packed Weight | (ozs) | 1     |

MOUNTING POSITION - Unrestricted.

## MAZDA

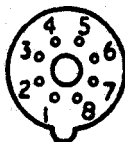
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TYPICAL OPERATION

|                                             |            |         |         |
|---------------------------------------------|------------|---------|---------|
| H.T. Voltage after de-coupling (volts)      | $V_{a(b)}$ | 150     | 150     |
| Anode Load (ohms)                           | $R_a$      | 220,000 | 100,000 |
| Anode Current (mA)                          | $I_a$      | 0.32    | 0.5     |
| Cathode Self Bias Resistance (ohms)         | $R_k$      | 3,900   | 2,200   |
| Grid Resistance of following valve (ohms)   | $R_g$      | 680,000 | 330,000 |
| Voltage Amplification                       |            | 44      | 40      |
| Output Voltage (RMS) for 5% Second Harmonic |            | 16.5    | 12      |

RULB ClearBASE B.S.A

Viewed from free end of pins.

CONNEXIONS

|       |                 |   |     |
|-------|-----------------|---|-----|
| Pin 1 | Heater          | 1 | h   |
| Pin 2 | Anode           |   | a   |
| Pin 3 | Control Grid    |   | g1  |
| Pin 4 | Internal Shield |   | s   |
| Pin 5 | Diode 2         | † | a'd |
| Pin 6 | Diode 1         |   | a'd |
| Pin 7 | Cathode         |   | k   |
| Pin 8 | Heater          | 1 | h   |

1 Pin 1 should be connected to the earthy end of the heater chain.

† It is recommended that Diode 2 should be used for detection.