

# MAZDA

10.LD.3

## DOUBLE DIODE TRIODE

Indirectly heated—for series operation

10.LD.3

### 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

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

$\delta$  Inter-electrode capacitances with holder capacitance balanced out.

$\xi$  These capacitances include a Benjamin B.6.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)	$\frac{1}{2}$
Approximate Packed Weight	(ozs)	1

MOUNTING POSITION - Unrestricted.

**MAZDA**

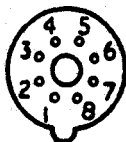
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TYPICAL OPERATION

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.