MAZDA
6.LD.20

DOUBLE DIODE TRIODE
Indirectly heated – for parallel operation

TENTATIVE

RATING

Heater Voltage (volts)	V_h	6.3
Heater Current (amps)	I_h	0.25
Maximum Anode Voltage (volts)	$V_{a(max)}$	250
Maximum Cathode Current (mA)	$I_{k(av)max}$	5
Mutual Conductance (mA/V)	g_m	¶ 3.4
Anode Impedance (ohms)	r_a	¶ 9,300
Amplification Factor	μ	¶ 31.5
Maximum Mean Diode Current per diode (mA)	$I_{a(d)av(max)}$	0.1
Maximum Potential Heater/Cathode (volts DC)	$V_{h-k(max)}$	150

¶ Taken at V_a = 100v; V_g = 0v.

INTER-ELECTRODE CAPACITANCES

		†	§
Anode/Earth (μμF)	$c_{out(t)}$	3.7	5.0
Anode/Grid (μμF)	c_{ag}	1.5	1.7
Grid/Earth (μμF)	$c_{in(t)}$	3.6	4.9
Grid/Diode 1 (μμF)	$c_{g,a'(d)}$	.0017	.003
Grid/Diode 2 (μμF)	$c_{g,a''(d)}$	.005	.015
Diode 1/Earth (μμF)	$c_{in(a'd)}$	2.1	3.4
Diode 1/Diode 2 (μμF)	$c_{a'(d)a''(d)}$	0.45	0.65
Diode 2/Earth (μμF)	$c_{in(a''d)}$	2.0	3.3
Anode/Diode 1 (μμF)	$c_{a,a'(d)}$	.0017	.0027
Anode/Diode 2 (μμF)	$c_{a,a''(d)}$	.0019	.0031

† Inter-electrode capacitances with holder capacitance balanced out.

§ These capacitances include a Benjamin B8A 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)	67
Maximum Diameter (mm)	22
Maximum Seated Height (mm)	54
Radius Over Location Key (mm)	12.25
Approximate Nett Weight (ozs)	¾
Approximate Packed Weight (ozs)	1

MOUNTING POSITION - Unrestricted.

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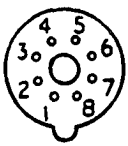
TYPICAL OPERATION

H.T. Applied Voltage (volts)	V_b	260	260
Decoupling Resistance (ohms)	Ω	22,000	22,000
Anode Load (ohms)	Z_a	47,000	100,000
Cathode Self-Bias Resistance (ohms)	R_k	1,500	2,200
Anode Current (mA)	I_a	2.0	1.3
Voltage Amplification *		19.5	21.5
Output Voltage (R.M.S.) for 2% Second Harmonic *		16.5	20.0

* When feeding an output valve having a 470,000 ohm grid resistor.

BULB Clear

BASE B.8.A.



Viewed from free end of pins.

CONNEXIONS

Pin 1	Heater]	h
Pin 2	Anode	a
Pin 3	Control Grid	g_1
Pin 4	Internal Shield	s
Pin 5	Diode 2 ¶	a"d
Pin 6	Diode 1	a'd
Pin 7	Cathode	k
Pin 8	Heater	h

] Pin 1 should preferably be connected to "earth" potential.

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