



AC/HL. DD

A.C. MAINS DOUBLE DIODE TRIODE

RATING.

Heater Voltage	...	...	...	...	...	...	4.0
Heater Current (amps)	...	...	...	...	...	...	1.0
Anode Voltage (maximum)	...	...	...	...	...	...	250
*Mutual Conductance (mA/V)	...	...	...	...	...	...	2.6
*Amplification Factor	...	...	...	...	...	...	36
*Anode A.C. Resistance (ohms)	...	...	...	...	...	...	13,800

*At $E_a = 100$; $E_g = 0$.

INTER-ELECTRODE CAPACITIES.

*Anode to Earth	...	...	...	...	...	9.75 $\mu\mu\text{F.}$
*Grid to Earth	...	...	...	...	...	5.0 $\mu\mu\text{F.}$
Anode to Grid	...	...	...	...	...	2.0 $\mu\mu\text{F.}$
*Diode 1 to Earth	...	...	...	...	...	4.0 $\mu\mu\text{F.}$
*Diode 2 to Earth	...	...	...	...	...	4.0 $\mu\mu\text{F.}$
Diode 1 to Diode 2	...	...	...	...	...	0.3 $\mu\mu\text{F.}$

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

DIMENSIONS.

Maximum Overall Length	...	...	...	...	123 mm.
Maximum Diameter	...	...	...	...	45 mm.

GENERAL.

The AC/HL. DD is an indirectly heated double diode triode designed as a combined detector amplifier and automatic volume control valve for use in A.C. mains operated receivers. It consists of two separate diodes and a triode on a common cathode sleeve. The diode section is completely screened within the valve from the triode section, and in operation the two sections are independent of each other. The bulb is metallised, and the valve is fitted with a standard 7-pin base, the connections to which are given overleaf.

APPLICATION.

The resistance between heater and cathode is of a very high order, so that the valve is eminently suitable for use in amplified A.V.C. circuits in which the triode unit acts as a combined audio-frequency amplifier and D.C. amplifier for A.V.C. purposes.

In normal operation one diode anode (pin No. 1) is employed as an audio frequency detector and the other (pin No. 3) to provide A.V.C. voltage. The detector diode load should be returned to cathode and the A.V.C. diode load to a point at negative potential to provide the necessary delay voltage.

MAZDA

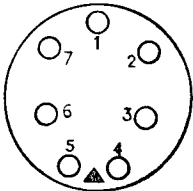
The damping introduced by the diode detector may be made quite small provided the load resistance is kept high, say 0.5 to 1 megohm.

It is essential to ensure that the effective impedance to audio frequencies of the circuit between the diode anode and cathode, is as nearly equal as possible to the D.C. resistance of this circuit, otherwise distortion at high modulation percentages will occur. The resistance in the grid circuit of the triode should be at least twice that of the diode load resistance.

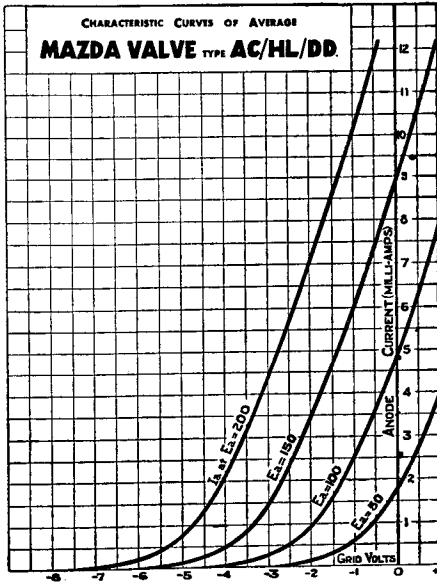
The use of the detector at high signal inputs necessitates the provision of a low frequency gain control between the detector output and the first low frequency amplifying valve, to prevent any possibility of overloading this amplifier.

BASING.

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|------------|---------------|
| Pin No. 1. | Diode 1. |
| 2. | Metallising. |
| 3. | Diode 2. |
| 4. | Heater. |
| 5. | Heater. |
| 6. | Cathode. |
| 7. | Anode. |
| Top Cap. | Control Grid. |



Viewed from the free end of the base.



Mazda Radio Valves are manufactured in Great Britain for the British Thomson-Houston Co., Ltd., London and Rugby.