MAZDA

T.21

THYRATRON

RATING.

Heater Voltage	4·0
Heater Current (Amps.)	1·2
Peak Anode Current (mA.)	300
Max. Peak to Peak Volts Scan Output	120
Peak Voltage between two electrodes	17
Gas Voltage Drop (approx.)	20
Maximum Frequency when used in time base circuits	15 kC

DIMENSIONS.

Maximum Overall Length	128 mm.
Maximum Diameter	39 mm.

GENERAL.

The T.21 is a three electrode thyratron in which a trace of gas has been introduced. The ions produced by collision of the gas molecules with the electron emission from the cathode serve to neutralise the normal space charge. When ionisation is established the internal resistance of the thyratron is negligible and the current flowing in the anode circuit is limited only by external resistance. The ionisation potential of the gas is approximately 17 volts and the flow of current will be maintained as long as the anode potential exceeds this value. The function of the grid is to control the anode potential at which ionisation takes place. The "Control Ratio" of the thyratron is amount by which anode potential for ionisation must be raised for each volt of bias applied to the grid. Once the ionisation has taken place variation of grid potential within wide limits will not affect it, and the anode potential must be reduced below the critical value in order to stop the discharge. The thyratron is fitted with a 5-pin base, the connexions to which are given overleaf.

APPLICATION.

Owing to its low voltage drop the T.21 is suitable for use in scanning circuits where the overall H.T. voltage is limited and it is recommended for use in circuits employing magnetic deflection. The T.21 is also suitable for use for grid controlled rectifier service. To prolong the life of the thyratron the cathode should be allowed to reach its full operating temperature before the application of the anode voltage. A resistance should be incorporated in the grid circuit to limit the flow of grid current when the thyratron strikes and a resistance should also be inserted in the anode circuit to limit the discharge current to 300 mA. peak. When used as a grid-controlled rectifier this grid resistance should not exceed 0·5 megohm in any case. In scanning circuits a minimum value of 500 ohms per volt is permissible.

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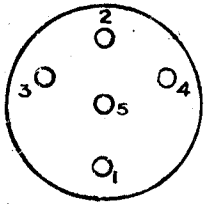
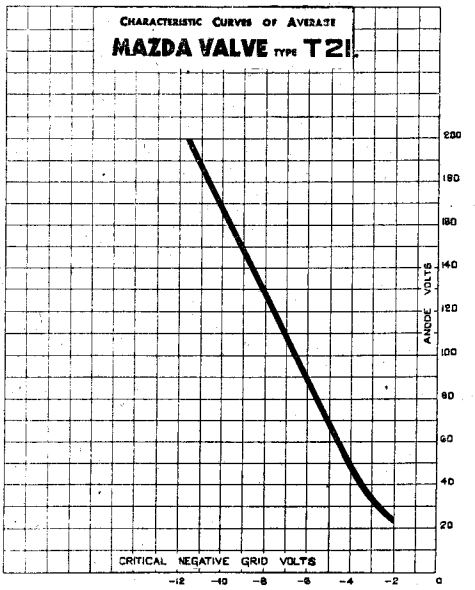
BASING.



Pin No. 1. —
2. Control Grid.
3. Heater.
4. Heater.
5. Cathode.
Top Cap. Anode.

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, and distributed by

THE EDISON SWAN ELECTRIC CO., LTD.,
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