MAZDA

TP 2620

AC/DC Indirectly heated Triode Pentode

RATING.

Heater Voltage	26
Heater Current (Amps.)	0.2
Pentode Section.	
Maximum Anode Voltage	250
Maximum Screen Voltage	250
Conversion Conductance (Maximum) (μA/V)	900
*Mutual Conductance (mA/V)	3.4
* *at Ea*=250 ; *Es*=200 ; *Eg*=0.	
Triode Section.	
Maximum Anode Voltage	200
Recommended Anode Voltage (approx.) ...	150
Maximum Mean Anode Current (mA) ...	2.0
Amplification Factor	30
*Mutual Conductance (mA/V)	1.4
* *at Ea*=100 ; *Eg*=0.	

INTER ELECTRODE CAPACITIES.

	Pentode.	Triode.
Input Capacity	8.0 $\mu\mu$F.	5.75 $\mu\mu$F.
Output Capacity ...	7.75 $\mu\mu$F.	4.25 $\mu\mu$F.
Grid to Anode Capacity	0.1 $\mu\mu$F.	2.5 $\mu\mu$F.

TYPICAL OPERATING CONDITIONS.

Anode Voltage	250 ...	200
Screen Voltage (Initial)	250 ...	200
Grid Bias Voltage	6.7 ...	5
Heterodyne Peak Voltage	3.75 ...	3
Impedance (ohms) (approx.) ...	700,000 ...	700,000
Anode Current (mA)...	8.5 ...	6.5
Screen Current (mA)	8.25 ...	2.5
Oscillator Anode Current (mA)	1.6 ...	1.5
Conversion Conductance (μA/V)	6.70 ...	—
Conversion Conductance Es=250, Eg=–40	8 ...	—
Conversion Conductance Es=200 (approx.) Eg=–35	...	8
Input Signal Handling Capacity (Peak Carrier Voltage)	12 ...	12

DIMENSIONS.

Maximum overall length	126 m.m.
Maximum diameter	45 m.m.

PRICE **20/-**

GENERAL.

The Mazda TP 2620 is an indirectly heated triode pentode valve which is designed for operation as a self oscillating frequency changer in DC or AC/DC receivers. The pentode section has variable mu characteristics and can handle a 12-volts peak carrier without distortion, in addition it has a high working impedance. The triode oscillator and pentode frequency changer sections are screened from each other, and are, except for a common cathode connection, completely independent of each other, and both functions may, therefore, be carried out with circuit arrangements giving the best possible operation.

Owing to the complete absence of any electronic coupling between the two sections, the oscillator frequency is independent of the operating conditions of the frequency changer section.

APPLICATION.

When operating as a self-oscillating frequency changer, the Mazda TP 2620 has variable mu characteristics suitable for use with diode or amplified automatic volume control.

It possesses all the advantages usually associated with the use of a separate oscillator and frequency changer, including low oscillator harmonic content and minimum noise from leakage and Schrott effect.

It is recommended that frequency changing should be accomplished by heterodyne injection in the common cathode circuit as shown in Fig. 1, the H.T. applied being 200 volts.

The variable mu characteristic has been specially shaped to reduce whistles, repeat points and cross modulation, and to ensure minimum interference the heterodyne peak voltage should not appreciably exceed 3 volts. A 12-volt peak carrier modulated at 60% can be handled without distortion with a heterodyne voltage of 3 volts and screen voltage of 250 volts.

The suppressor grid should be returned to cathode, and the screen and anode circuits must be decoupled to cathode and not to earth. A common decoupling resistance (R2 in Fig. 1) may be used and should not be less than 5,000 ohms.

The condensers C3 and C4, the latter for long wave operation, combine with the self bias resistance R4 to form a filter circuit, which reduces the variation of heterodyne voltage over the required frequency ranges to a minimum; and also reduces oscillator harmonics.

The heater connected to pin No. 5 should be at the lowest A.C. potential with respect to H.T-ve.

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Showrooms in all the Principal Towns
Mazda Valves are manufactured in Great Britain for
The British Thomson-Houston Co., Ltd.,
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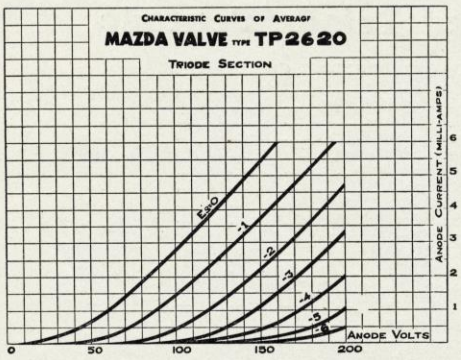
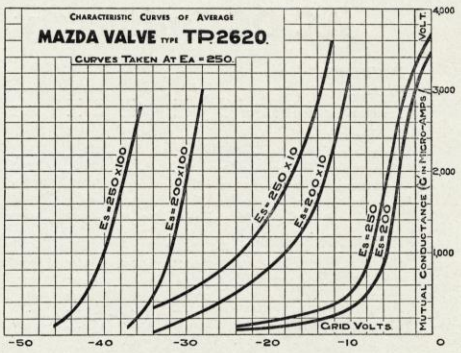
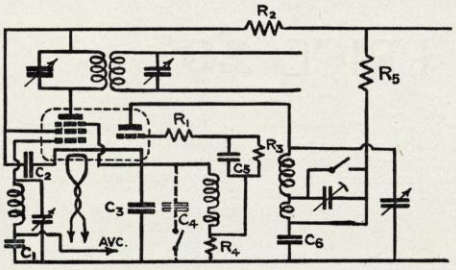
MAZDA

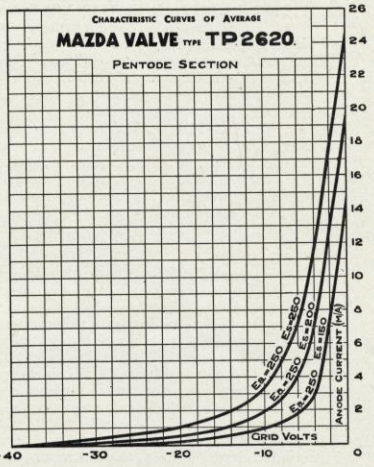
TP 2620







R_1 = 1,000 ohms.
R_2 = 5,000 ohms.
R_3 = 50,000 ohms.
R_4 = 500 ohms.
R_5 = 50,000 ohms.
C_1 = 0.1 mfd.
C_2 = 0.1 mfd.
C_3 = .0003 mfd.
C_4 = .001 mfd.
C_5 = .0005 mfd.
C_6 = 0.1 mfd.



HEATERS.

The heaters of Mazda AC/DC valves are designed to operate at a constant current of 0.2 amp., and when the heaters are wired in series the ballast resistance should be such that the current has this value at the average line voltage.

If a resistance is employed to control the heater current, it is recommended that it be tapped every 10 volts in the 200—250 volt range.

CONNECTIONS TO BASE.

Pin No. 1.—Pentode Screen.
Pin No. 2.—Pentode Anode.
Pin No. 3.—Suppressor Grid.
Pin No. 4.—Heater.
Pin No. 5.—Heater.
Pin No. 6.—Cathode.
Pin No. 7.—Triode Anode.
Pin No. 8.—Triode Grid.
Pin No. 9.—Metal Coating.
Top Cap.—Pentode Control Grid.

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