MAZDA
24.8.1
TRIGATRON

GENERAL

A trigatron is a spark gap which operates as a switch for discharging the delay line in pulse series modulation. The instant of breakdown can be accurately controlled by means of a triggering voltage applied to a third electrode. This triggering voltage distorts the field between anode and cathode converting the sphere to sphere gap into a point to sphere gap. Accuracy of control is further improved by irradiating the gap with ultra violet light from a corona discharge.

TYPICAL OPERATION (for Linear Charging Conditions)

| Repetition Frequency (pulses per second) | 1000 | 1200 | 1500 | 2500 |
| Pulse Length (micro-second)             | 0.2  | 1.0  | 0.5  | 0.25 |
| Approximate Peak Pulse Power Output (kW) | 150  | 150  | 150  | 150  |
| Line and Load Impedance (ohms)          | 60   | 80   | 80   | 80   |
| Main Gap Hold-off Voltage               |      |      |      |      |
| - Cathode to Anode (kV peak)‡           | -7.2 | -7.2 | -7.2 | -7.4 |
| Average Trigger Voltage (kV peak)‡      | 3.0  | 3.2  | 3.2  | 3.2  |
| Approximate D.C. Supply Voltage (kV)§    | 4.0  | 4.0  | 4.0  | 4.1  |

‡ With recommended circuit and an open circuit trigger voltage 8.5 kV peak with a build-up time to maximum voltage of approximately 2/3 μ Sec.

§ Based on a peak/D.C. applied voltage ratio of 1:8. This ratio depends on the losses in the charging choke, varying between 1:8 and 2:0.

NOTE All voltages measured with respect to anode.

MOUNTING POSITION - Unrestricted.

BASE Special

DIMENSIONS

| Maximum Overall Length (mm) | 156 |
| Maximum Diameter (mm)       | 70  |
| Approximate Nett Weight (ozs) | 7   |
| Approximate Packed Weight (ozs) | 14  |

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OUTLINE DRAWING OF
VALVE 24B1

CATHODE

PROTECTIVE SOCK
FOR BULB

DIA MAX
55.5 ± 0.13
OUTSIDE DIA

70.0

6:0 MAX

0.595
0.585

1.0 ± 0.008

1.0 ± 0.01

145.0 ± 5.0

BLANK
ANODE

60.6 ± 0.25 PC DIA.
FOR 4.2 DIA PINS

TRIGGER ELECTRODE

Pin Locations are to within ± 3°

Base viewed from free end.

All dimensions are in mms. unless stated otherwise.

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