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)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repetition Frequency (pulses per second)</td>
<td>800.0</td>
</tr>
<tr>
<td>Pulse Length (μs)</td>
<td>1.0</td>
</tr>
<tr>
<td>Peak Pulse Power Output (kW approx.)</td>
<td>530.0</td>
</tr>
<tr>
<td>Line and Load Impedance (ohms)</td>
<td>80.0</td>
</tr>
<tr>
<td>Main Gap Voltage (cathode to anode)(kV peak)</td>
<td>-13.3</td>
</tr>
<tr>
<td>Minimum Main Gap Voltage (kV peak)</td>
<td>-12.0</td>
</tr>
<tr>
<td>Average Trigger Voltage (kV peak)</td>
<td>4.0</td>
</tr>
<tr>
<td>Approximate D.C. Supply Voltage (kV) ‡</td>
<td>-7.4</td>
</tr>
</tbody>
</table>

* With recommended circuit and an open circuit trigger voltage 10.5 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 1.8:1. This ratio depends on the losses in the charging choke, varying between 1.8:1 and 1.9:1.

NOTE All voltages measured with respect to anode.

MOUNTING POSITION Unrestricted.

BASE Special.

DIMENSIONS

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Overall Length (mm)</td>
<td>166</td>
</tr>
<tr>
<td>Maximum Diameter (mm)</td>
<td>70</td>
</tr>
<tr>
<td>Approximate Nett Weight (ozs)</td>
<td>7</td>
</tr>
<tr>
<td>Approximate Packed Weight (ozs)</td>
<td>14</td>
</tr>
</tbody>
</table>

June 1950

RADIO DIVISION

THE EDISON SWAN ELECTRIC COMPANY LTD.
MAZDA
24.C.3
COLD CATHODE TRIGATRON
OUTLINE DRAWING OF
MAZDA VALVE 24C3

CATHODE

PROTECTIVE SOCK FOR BULB

70.0
DIA MAX
55.5 ± 0.03
OUTSIDE DIA

BLANK

135°

60.6 ± 0.25 PC.DIA.
FOR 4-2 DIA PINS

ANODE

TRIGGER ELECTRODE

Pin Locations are to within ± 0.01

Base viewed from free end.

All dimensions are in mms. unless stated otherwise.

June 1950
RADIO DIVISION

THE EDISON SWAN ELECTRIC COMPANY LTD
Break modulator
H.T. + 400V. (approx.)

Resonant frequency
with stray capacities = 380 Kcs.

Break modulator
valve type 11E2 or 11E3

Trigatron

Pulse forming network

Load

H.T. +