MAZDA
31CI

6" MAGNETIC ALUMINISED CATHODE RAY TUBE
Indirectly heated— for Radio D.F. Compass
(High Brightness Level)

RATING
Heater Voltage (volts) \( V_h \) 4.0
Heater Current (amps) \( I_h \) 0.72
Maximum Anode Voltage (volts) \( V_a (\text{max}) \) 10,000*
Minimum Anode Voltage (volts) \( V_a (\text{min}) \) 7,500

* The maximum rating of 10kV is a Design Centre rating. The absolute rating of 12.5kV maximum must not be exceeded.

INTER-ELECTRODE CAPACITANCES (pF)§
Grid I/all other electrodes \( C_{g,\text{all}} \) 4.7
Cathode/all other electrodes \( C_{k,\text{all}} \) 5.3

§ These capacitances include a "Cinch" wafer duodecal holder.

DIMENSIONS
Maximum Overall Length (mm) 468
Maximum Face Diameter (mm) 160
Maximum Neck Diameter (mm) 35
Approximate Nett Weight (lbs) 2\( \frac{1}{2} \)
Approximate Packed Weight (lbs) 16\( \frac{1}{2} \)

NOTES
The 31CI Cathode Ray Tube has a concave face treated to reduce specular reflection and has an internal compass scale graduated with octantal correction. The 31CI and 31C2 differ only in the manner of scale graduation.

TYPICAL OPERATION
Anode Voltage (volts) \( V_a \) 9,500
Negative Grid Bias for cut-off of 140 mm focused line (volts) \( V_g \) 43–93
Average Peak to Peak modulating Voltage for modulation up to 150 µA (volts) 30
Maximum Peak to Peak modulating Voltage for modulation of Limit C.R. Tube up to 150 µA (volts) 35

Typical Operation (continued overleaf)
The heater and cathode should be connected at the same DC potential. In the case of cathode modulation it is recommended that a resistance not exceeding 100,000 ohms should be inserted between heater and cathode.

A resistance should be inserted in the anode circuit in order to limit the discharge current to 100mA max., in the event of a flash over inside the tube.

BASE—(B12A) 5 pin

Viewed from Free End of Pins

ANODE CAP—Cavity (CT8)

CONNECTIONS

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<thead>
<tr>
<th>Pin</th>
<th>Connection</th>
<th>Pinout</th>
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<tr>
<td>1</td>
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<tr>
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<tr>
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<td>12</td>
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<tr>
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All dimensions in mm.
Anode Cap in line (±15°) with keyway on base.
* Determined by Reference Line Gauge No. 6. (See Section 3)
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SCALE ARRANGEMENT.

NON UNIFORM SCALE

$30^\circ \pm 10^\circ$

POSITION OF ANODE CAP RELATIVE TO SCALE

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INDUSTRIAL
VALVE & CRT DIVISION
SIEMENS EDISON SWAN LIMITED