TENTATIVE CHARACTERISTICS and RATINGS

HEATER VOLTAGE (A.C. or D.C.) 6.3 Volts
HEATER CURRENT 0.6 Ampere
FOCUSING METHOD Electrostatic
DEFLECTION METHOD Electrostatic

Electrodes DJ1 and DJ2 are nearest to screen and designated "upper."
DJ1 is on same side of tube as pin No. 4.
Electrodes DJ3 and DJ4 are nearest to base and designated "lower."
DJ3 is on same side of tube as pin No. 1.
Radial Deflecting Electrode is aligned with tube axis.

PHOSPHOR No. 1
FLUORESCENT COLOR Green
PERSISTENCE Medium

DIRECT INTERELECTRODE CAPACITANCES (Approx.):

Grid No. 1 to All Other Electrodes 8.0 μf
Deflecting Electrode DJ1 to Deflecting Electrode DJ2 1.0 μf
Deflecting Electrode DJ3 to Deflecting Electrode DJ4 0.7 μf
Deflecting Electrode DJ1 to All Other Electrodes 7.0 μf
Deflecting Electrode DJ3 to All Other Electrodes 8.5 μf
Deflecting Electrode DJ1 to All Other Electrodes except Deflecting Electrode DJ2 6.0 μf
Deflecting Electrode DJ2 to All Other Electrodes except Deflecting Electrode DJ1 5.0 μf
Deflecting Electrode DJ3 to All Other Electrodes except Deflecting Electrode DJ4 8.5 μf
Deflecting Electrode DJ4 to All Other Electrodes except Deflecting Electrode DJ3 6.0 μf
Radial Deflecting Electrode DJ5 to Anode No. 2 2.2 μf

OVERALL LENGTH 10-3/8" 15/16"
GREATEST DIAMETER of BULB 3" 1/16"
MINIMUM USEFUL SCREEN DIAMETER 2-3/4"
BASE Medium Magnal 11-Pin
RMA BASING DESIGNATION 11C

MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS
Maximum Ratings Are Absolute Values

ANOYE No. 2 (High-Voltage Electrode) VOLTAGE 2200 max. Volts
ANOYE No. 1 (Focusing Electrode) VOLTAGE 1100 max. Volts
GRID (Control Electrode) VOLTAGE Never positive
PEAK VOLTAGE BETWEEN ANODE No. 2 and ANY DEFLECTING ELECTRODE 550 max. Volts
GRID-CIRCUIT RESISTANCE 1.5 max. Megohms
IMPEDANCE of ANY DEFLECTING-ELECTRODE CIRCUIT at HEATER-SUPPLY FREQUENCY 1.0 max. Megohm

TYPICAL OPERATION:
Anode No. 2 Voltage* 1500 2000 Volts
Anode No. 1 Voltage for Focus at 75° of Grid Voltage for Cut-Off** 400 575 Volts
Grid Voltage for Visual Cut-Off*** 400 ±50 Volts
Values subject to variation of 200 ±50 Per cent

July 14, 1942
TYPICAL OPERATION: (continued)

Deflection Sensitivity:
- Electrodes DJ1 and DJ2: 0.153 mm/volt D.C.
- Electrodes DJ3 and DJ4: 0.205 mm/volt D.C.
- Radial Deflection Electrode DJ5: 2.89

Deflection Factor:
- Electrodes DJ1 and DJ2: 165.5 volts D.C./in.
- Values subject to variation of ±20% Per cent
- Electrodes DJ3 and DJ4: 124 volts D.C./in.
- Radial Deflection Electrode DJ5: 221
- Ratio of DJ1–DJ2 to DJ3–DJ4 Factor: 1.34
- Values subject to variation of ±15.5 Per cent

Brilliance and definition decrease with decreasing anode No. 2 voltage. In general, anode No. 2 voltage should not be less than 1500 volts.

Individual tubes may require between +20% and -20% of these values with grid voltage between zero and cut-off.

Visual extinction of stationary focused spot.

mm/volt for unit circle diameter in mm. Since deflection sensitivity is inversely proportional to circle diameter, sensitivity for any desired circle diameter is unit value D(in mm).

Volts D.C./inch for unit circle diameter in inches. Since deflection factor is directly proportional to circle diameter, deflection factor for any desired circle diameter is unit value x D (in inches).

SPOT POSITION

The undeflected focused spot will fall within a 10-mm square centered at the geometric center of the tube face and having one side parallel to the trace produced by DJ1 and DJ2.

Suitable test conditions are: anode No. 2 voltage, 2000 volts; anode No. 1 voltage, adjusted for focus; deflecting-electrode resistors, 1 megohm each, connected to anode No. 2; the tube shielded from all extraneous fields. To avoid damage to the tube, make the test with grid voltage near cut-off.

BASING and DEFLECTING ELECTRODE ALIGNMENT

The angle between the trace produced by DJ1 and DJ2 and its intersection with the plane through the tube axis and pin No. 1 will not exceed 10°.

The angle between the trace produced by DJ1 and DJ2 and the trace produced by DJ3 and DJ4 will be 90° ±30°.

With DJ1 (pin 3) positive with respect to DJ2 (pin 8), the spot will be deflected toward pin 4; likewise, with DJ3 (pin 9) positive with respect to DJ4 (pin 6), the spot will be deflected toward pin 1.

ANODE No. 2 CURRENT vs GRID VOLTAGE CHARACTERISTIC

Anode No. 2 Voltage.....2000 volts
Anode No. 1 Voltage.....Adjusted for focus

<table>
<thead>
<tr>
<th>Anode No. 2 Current, mA</th>
<th>Grid Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
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<tr>
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July 2, 1942
RADIAL-DEFLECTION ELECTRODE TERMINAL MAY BE ECCENTRIC WITH RESPECT TO THE TUBE AXIS BY \( \frac{1}{16} \) MAX.

LARGE WAFER MEDIUM MAGNAL II-PIN BASE WITH SLEEVE NO T243

BOTTOM VIEW OF BASE
TRANSPARENT SCALE FOR 3CPI-S1/1808-PI

TRACE PRODUCED BY DEFLECTING ELECTRODES DJ₁ AND DJ₂ IS ALONG LINE A-A'

TRANSPARENT SCALE MAY BE ECCENTRIC WITH RESPECT TO THE TUBE AXIS BY 1/16" MAX.

BOTTOM VIEW OF SOCKET CONNECTIONS

PIN 1 - HEATER
PIN 2 - NO CONNECTION
PIN 3 - DEFLECTING ELECTRODE DJ₁
PIN 4 - ANODE NO.1
PIN 5 - INTERNAL CONNECTION - DO NOT USE
PIN 6 - DEFLECTING ELECTRODE DJ₃
PIN 7 - ANODE NO.2, GRID NO.2
PIN 8 - DEFLECTING ELECTRODE DJ₂
PIN 9 - DEFLECTING ELECTRODE DJ₃
PIN 10 - GRID NO.1
PIN 11 - HEATER, CATHODE
THREADED TERMINAL - DEFLECTING ELECTRODE DJ₅