



CORPORATION

5600 WEST JARVIS AVENUE

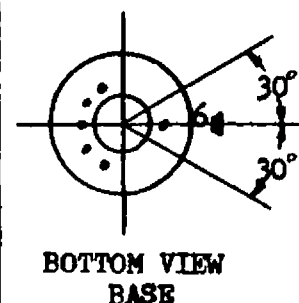
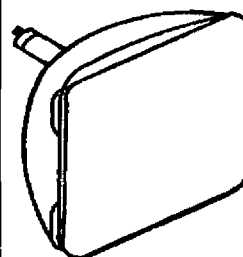
CHICAGO 48, ILLINOIS

TELEPHONE MULBERRY 5-5000

TELETYPE 312-265-1293

23DNP4DESCRIPTION

23" Direct View	Low G_2 Voltage (35 V.)
Rectangular Glass Envelope	Cathode Drive Design
Spherical Faceplate	92° Magnetic Deflection
Gray Filter Glass	Electrostatic Focus
Aluminized Screen	External Conductive Coating
6.3 Volt. 600 Ma. Heater	No Ion Trap
Bonded Implosion Panel	

SPECIAL CHARACTERISTICSAnode Penetration Current⁴150 μ a max.ELECTRICAL DATA

Focusing Method

Electrostatic

Deflection Angles, Approximate

Horizontal

81 Degrees

Vertical

66 Degrees

Diagonal

92 Degrees

Direct Interelectrode Capacitances

Cathode to all other electrodes, approximate

5 uuf

Grid #1 to all other electrodes, approximate

6 uuf

External Conductive Coating to Anode

2500 max. uuf

2000 min. uuf

Heater Current at 6.3 volts

600 $\pm$ 10% Ma

Heater Warm-up time

11 Seconds

OPTICAL DATA

Phosphor Number

P₄, Aluminized

Light Transmittance at Center, Approximate

40 Percent

MECHANICAL DATA

Overall Length

18 $\frac{7}{16} \pm \frac{7}{16}$ Inches

Greatest Dimensions of Tube (Implosion Panel)

Diagonal

24 $\frac{45}{64} \pm \frac{3}{32} - \frac{1}{16}$ Inches

Width

21 $\frac{5}{16} \pm \frac{1}{8}$ Inches

Height

17 $\frac{13}{32} \pm \frac{3}{32} - \frac{1}{8}$ Inches

Minimum Useful Screen Dimensions (Projected)

Diagonal

22 $\frac{5}{16}$ Inches

Horizontal Axis

19 $\frac{5}{16}$ Inches

Vertical Axis

15 $\frac{1}{4}$ Inches

Area

282 Sq. Inches

Neck Length

5 $\frac{5}{8} \pm \frac{3}{16}$ Inches

Bulb

J187D1

Implosion Panel

FP198A1

Bulb Contact

J1-21

Base

B6-203

Basing	12L
Bulb Contact Alignment	
Anode contact aligns with pin position #6	± 30 Degrees

RATINGS (Design Maximum System)

Unless otherwise specified, voltages are positive and measured with respect to Grid #1

Maximum Anode Voltage	25,000 Volts
Minimum Anode Voltage	16,000 Volts
Maximum Grid #4 (Focusing Electrode) Voltage	± 1100 -500 Volts
Maximum Grid #2 Voltage	60 Volts
Minimum Grid #2 Voltage	25 Volts
Cathode Voltage	100 Volts
Maximum Heater Voltage	7 Volts
Minimum Heater Voltage	5.8 Volts
Maximum Heater-Cathode Voltage	
Heater negatives with respect to cathode	
During warm-up period not to exceed 15 seconds	-410 Volts
After equipment warm-up period	-180 Volts
Heater positive with respect to cathode	180 Volts

TYPICAL OPERATING CONDITIONS

CATHODE DRIVE SERVICE

Unless otherwise specified, all voltage values are positive with respect to Grid #1

Anode Voltage	20,000 Volts
Grid #4 Voltage (Focusing Electrode) ^{2, 3}	250 Volts
Grid #2 Voltage ₁	35 Volts
Cathode Voltage	25 to 50 Volts

MAXIMUM CIRCUIT VALUES

Maximum Grid #1 Circuit Resistance	1.5 Megohms
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NOTES

1. Visual extinction of focused raster.
2. With the combined grid#1 bias voltage and video-signal voltage adjusted to give an anode current of 200 microamperes on a 19 5/16 x 15 1/4 pattern from RCA 2F21 Monoscope or equivalent.
3. Individual tubes will have satisfactory focus at some value between 0 and 500 volts.
4. This is the maximum beam current with 25,000 volts (design max.) applied to Anode, zero voltage applied to Cathode, Grid #1 and Grid #2; all other elements to have nominal voltages.

THE



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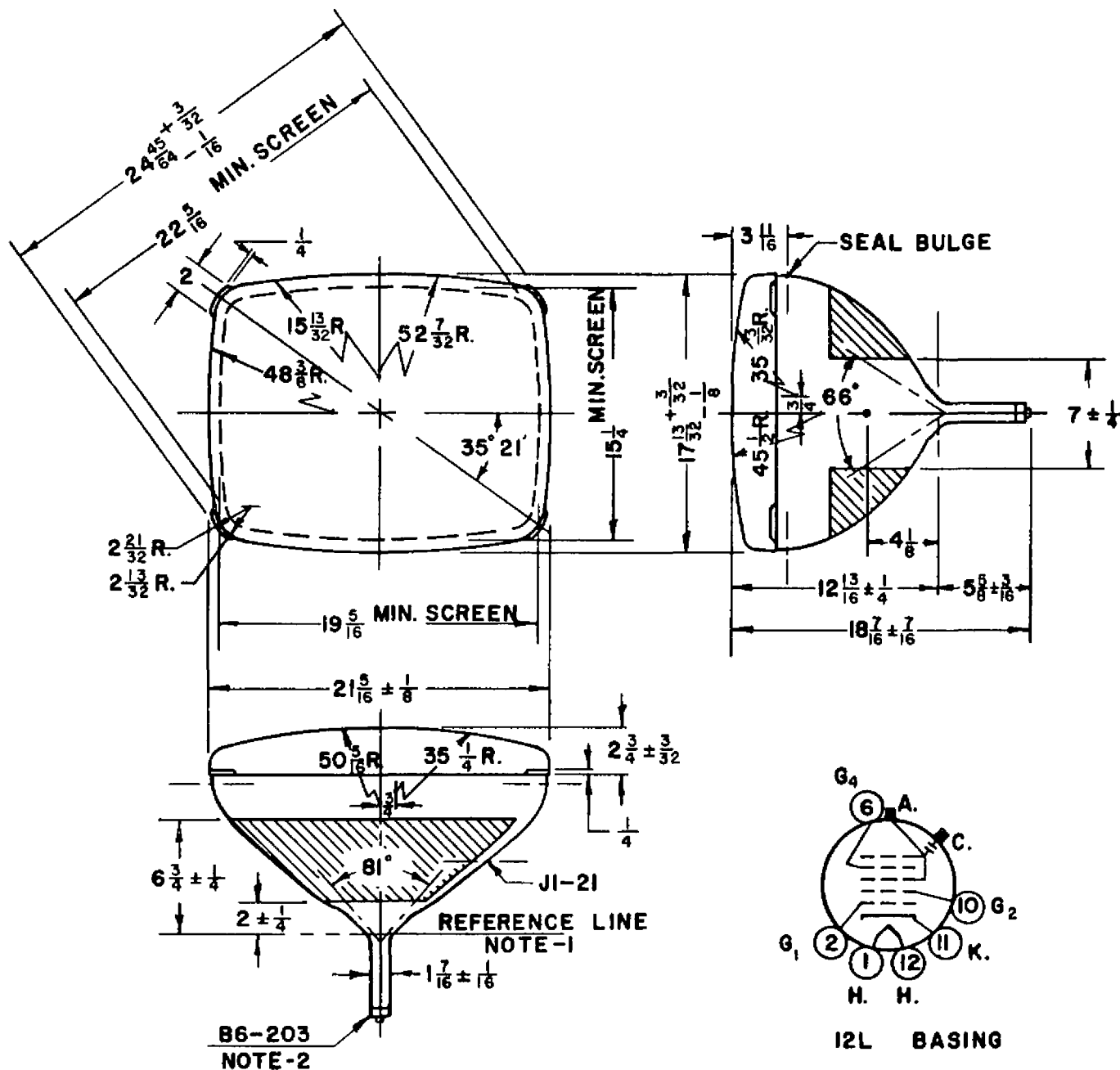
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NOTE:

1. REFERENCE LINE DETERMINED BY PLANE C-C' OF JEDEC REFERENCE LINE GAUGE NO.116
2. BASE PIN NO.6 ALIGNS WITH ANODE CONTACT WITHIN 30°