



CORPORATION

5600 WEST JARVIS AVENUE

CHICAGO 48, ILLINOIS

TELEPHONE MULBERRY 5-5000

TELETYPE 312-265-1293

23ECP4

DESCRIPTION

23" Direct View	Bonded Implosion Panel
Rectangular Glass Envelope	92° Magnetic Deflection
Gray Filter Glass	Electrostatic Focus
Aluminized Screen	External Conductive Coating
6.3 Volts, 600 Ma. Heater	No Ion Trap
Cathode Drive Design	Low G ₂ Voltage (35V)

SPECIAL CHARACTERISTICS-Anode Penetration Current 150 ua max.
(Note 4)

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 (approx)	5 uuf
Grid #1 to all other electrodes (approx)	6 uuf
External Conductive Coating to Anode	2,500 max. uuf 2,000 min. uuf
Heater Current at 6.3 Volts	600 ± 10% Ma.
Heater Warm-up Time	11 Seconds

OPTICAL DATA

Phosphor Number	P ₄ Aluminized
Light Transmittance at Center (approx.)	46 Percent

MECHANICAL DATA

Overall Length	18 5/16" ± 7/16"
Greatest Dimensions of Tube	
Diagonal	23 7/16" ± 1/8"
Width	20 1/2" ± 1/8"
Height	16 1/2" ± 1/8"
Minimum Useful Screen Dimensions (Projected)	
Diagonal	22 5/16"
Horizontal Axis	19 5/16"
Vertical Axis	15 1/4"
Area	282 Sq. Inches
Neck Length	5 5/8" ± 3/16"
Bulb	J187D1
Implosion Panel	FP187B2
Bulb Contact	J1-21
Base	B6-203
Basing	12L
Bulb Contact Alignment	
J1-21 contact aligns with pin position #6 ± 30 degrees	

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RATINGS (Design Maximum System)

Unless otherwise specified, voltage values 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
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 negative with respect to cathode	
During Warm-up time not to exceed 15 sec.	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 DC
Grid #4 (Focusing Electrode) voltage (Notes 2 and 3)	250 Volts DC
Grid #2 Voltage	35 Volts DC
Cathode Voltage (Note 1)	25 to 50 Volts DC

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 micro-amperes 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.

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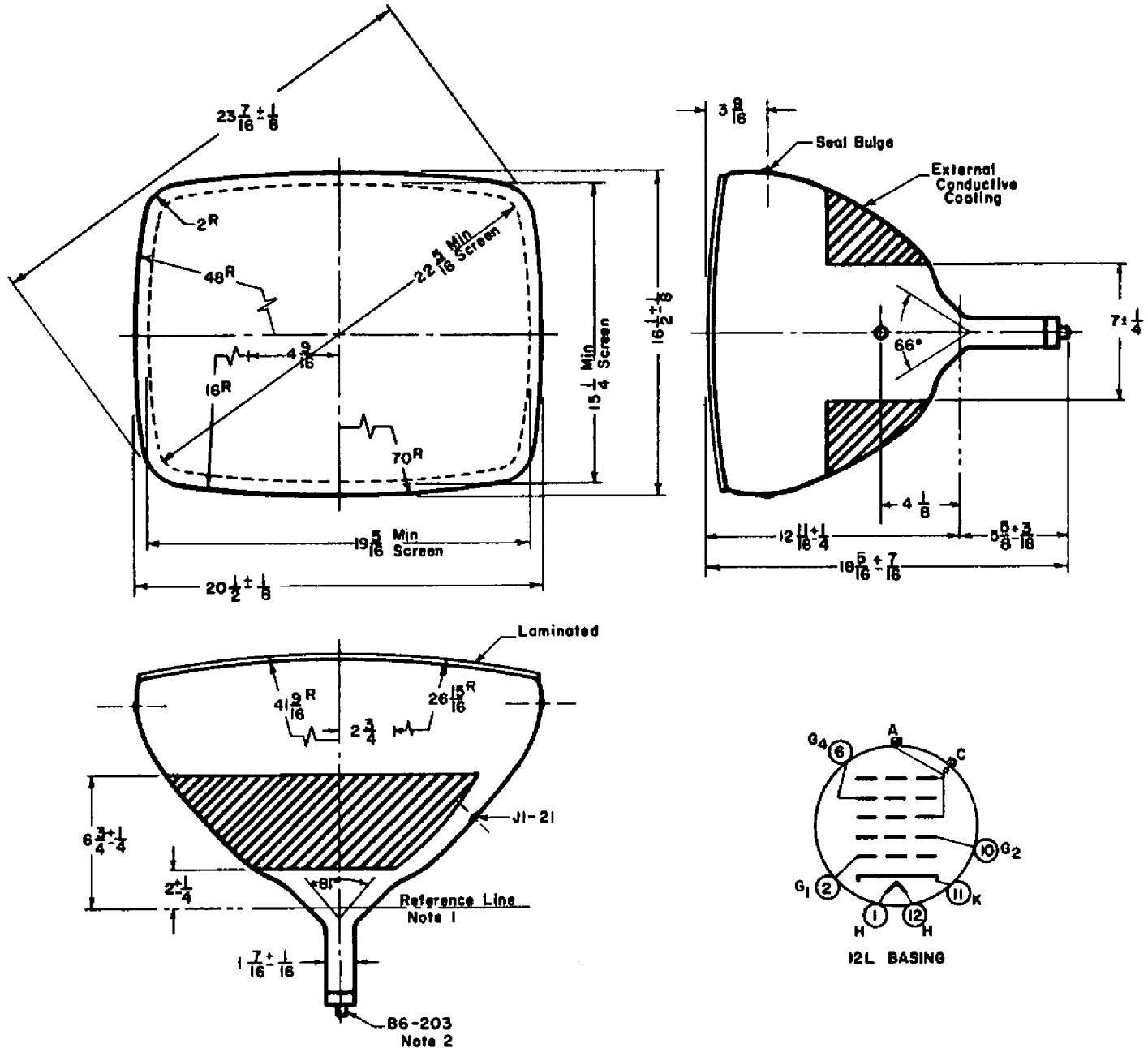
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NOTES:

1. Reference Line determined by Plane C-C' of J.E.D.E.C. Reference Line Gauge no. 116.
2. Base pin no. 6 aligns with anode contact within 30° .