

TELEVISION PICTURE TUBE TYPE 23DCP4

94° Magnetic Deflection
 Rectangular Glass
 Aluminized Screen
 Gray Filter Glass

6.3 Volt, 450 Ma. Heater
 Electrostatic Focus
 5" Neck Length
 Low G₂ Voltage (30 Volts)

External Conductive Coating
 Spherical Faceplate
 No Ion Trap
 15-1/16" × 19-1/8" Screen Size

ELECTRICAL

Focusing Method	Low Voltage Electrostatic
Deflection Method	Magnetic
Deflection Angles (Approx.):	
Horizontal	83 Degrees
Vertical	68 Degrees
Diagonal	94 Degrees
Direct Interelectrode Capacitances:	
Cathode to all other electrodes, (Approx.)	5 μμf
Grid 1 to all other electrodes, (Approx.)	6 μμf
External Conductive Coating to Anode:	
Maximum	2500 μμf
Minimum	1700 μμf
Heater Current at 6.3 Volts	450 ± 5% Ma.
Heater warm-up Time (Note 1)	11 Seconds

OPTICAL

Phosphor Number	Aluminized P4
Light Transmittance at Center, Approximate	78 Percent

MECHANICAL

Overall Length	17-5/64 ± 5/16	Inches
Greatest Dimensions of Tube:		
Diagonal	23-3/8 ± 1/8	Inches
Width	20-1/2 ± 1/8	Inches
Height	16-1/2 ± 1/8	Inches
Minimum Useful Screen Dimensions (Projected):		
Diagonal	22-1/4	Inches
Horizontal	19-1/8	Inches
Vertical	15-1/16	Inches
Area	282	Sq. Inches
Neck Length	5 ± 1/8	Inches
Bulb	J187H1	
Bulb Contact	J1-21	
Base	B7-208	
Basing	8HR	
Weight (Approx.)	27-1/2	Pounds

RATINGS

Design Maximum System	
Unless Otherwise Specified, Voltage Values are Positive with Respect to Grid 1.	
Maximum Anode Voltage	23500 Volts
Minimum Anode Voltage (Note 2)	11000 Volts
Maximum Grid 4 Voltage (Focusing Electrode)	+1100, -400 Volts
Maximum Grid 2 Voltage	70 Volts
Minimum Grid 2 Voltage	20 Volts
Cathode Voltage:	
Maximum Negative Bias Value	0 Volts DC
Maximum Negative Peak Value	2 Volts
Maximum Positive Bias Value	154 Volts DC
Maximum Positive Peak Value	220 Volts
Maximum Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	
During Warm-Up Period not to Exceed	
15 Seconds	450 Volts
After Equipment Warm-Up Period	200 Volts
Heater Positive with Respect to Cathode	200 Volts

TYPICAL OPERATING CONDITIONS

CATHODE DRIVE SERVICE

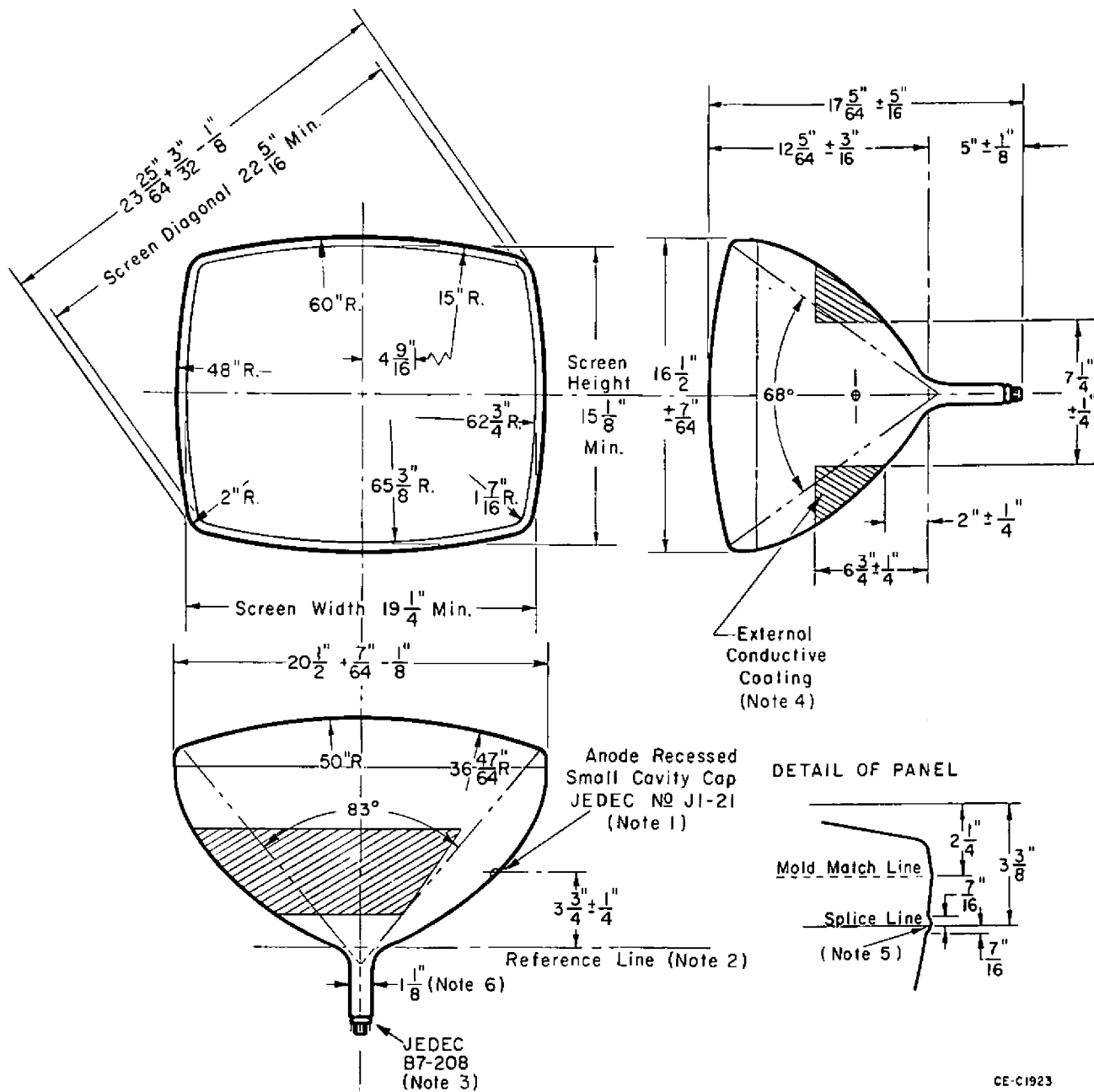
Unless Otherwise Specified, All Voltage Values are Positive with Respect to Grid 1.	
Anode Voltage	18000 Volts DC
Grid 4 Voltage (Focusing Electrode)	0 to 400 Volts DC
Grid 2 Voltage	50 Volts DC
Cathode Voltage for Raster Cutoff	35 to 55 Volts DC

LIMITING CIRCUIT VALUES

Maximum Grid 1 Circuit Resistance	1.5 Megohms
Minimum Grids 2 & 4 Circuit Resistance (Note 3)	10000 Ohms

NOTES

1. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times rated heater voltage divided by rated heater current.
 2. Brilliance and definition decrease with decreasing anode voltage. Operation with anode voltage less than 11000 volts is not recommended.
 3. Protective resistance in the grid 2 and grid 4 (focus electrode) circuits is advisable to prevent damage to the tube.
- X-RAY WARNING: Operation with voltages in excess of 16KV may require shielding to limit radiation of very soft x-rays.



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