

May 1, 1963

TELEVISION PICTURE TUBE TYPE 23DAP4

94° Magnetic Deflection
Rectangular Glass
Aluminized Screen
Gray Filter Glass

6.3 Volt, 600 Ma. Heater
Electrostatic Focus
5" Neck Length
Low G₂ Voltage (50 Volts)

External Conductive Coating
Spherical Faceplate
No Ion Trap
15-1/16" x 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 $\mu\mu\text{f}$
Grid 1 to all other electrodes, (Approx.)	6 $\mu\mu\text{f}$
External Conductive Coating to Anode:	
Maximum	2500 $\mu\mu\text{f}$
Minimum	1700 $\mu\mu\text{f}$
Heater Current at 6.3 Volts	600 $\pm$ 5% Ma.
Heater warm-up Time (Note 1)	11 Seconds

OPTICAL

Phosphor Number	Aluminized P 4
Light Transmittance at Center, Approximate	78 Percent

MECHANICAL

Overall Length	17-5/64 $\pm$ 5/16	Inches
Greatest Dimensions of Tube:		
Diagonal	23-3/8 $\pm$ 1/8	Inches
Width	20-1/2 $\pm$ 1/8	Inches
Height	16-1/2 $\pm$ 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 $\pm$ 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	23000	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	.40	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

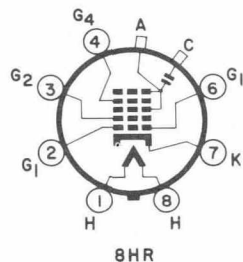
LIMITING CIRCUIT VALUES

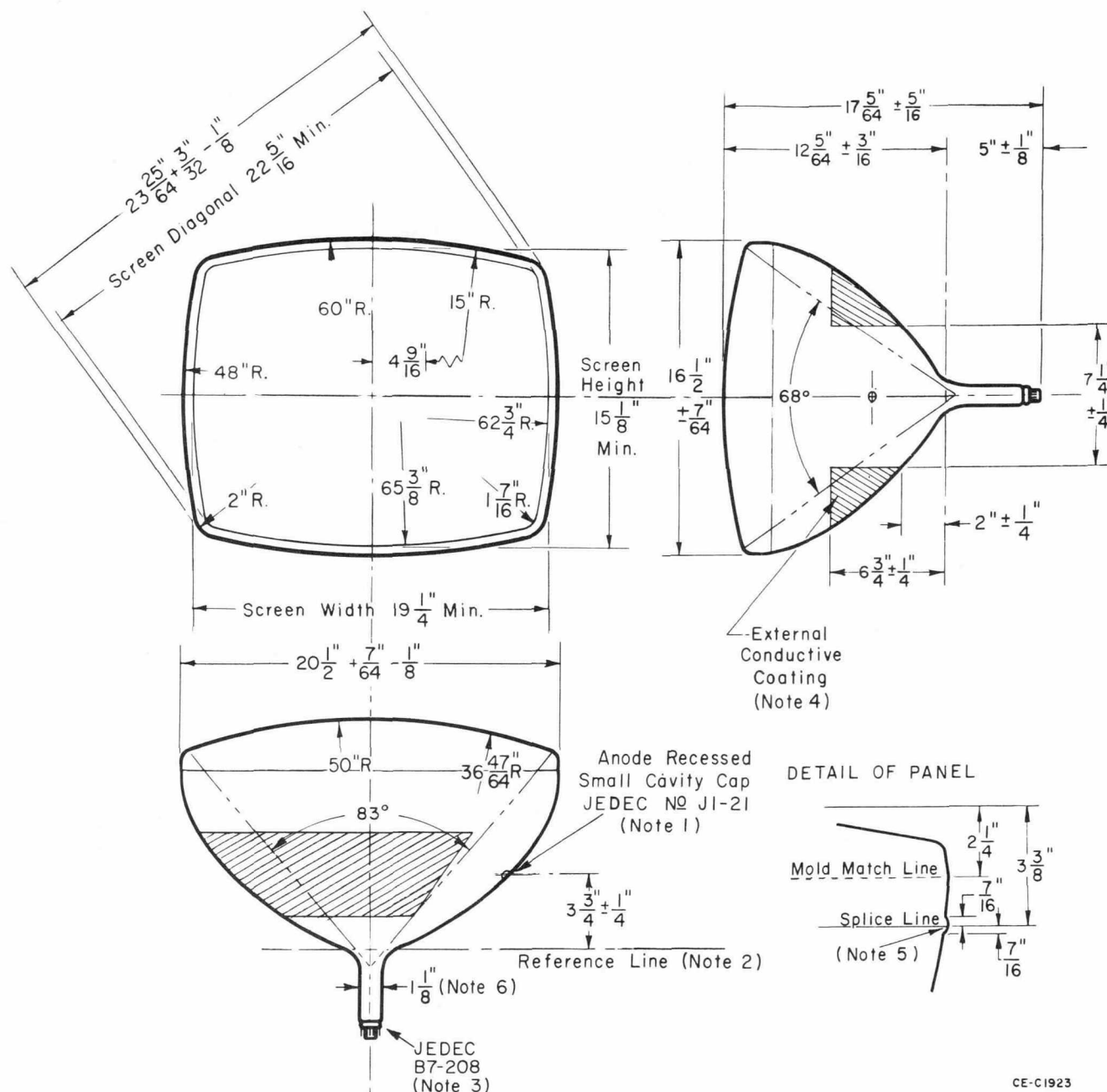
Maximum Grid 1 Circuit Resistance	1.5	Megohms
Minimum Grids 2 & 4 Circuit Resistance (Note 3)	10000	Ohms

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.





CE-C1923