

July 1, 1962

TELEVISION PICTURE TUBE TYPE 23DHP4

110° Magnetic Deflection
Rectangular Glass
Aluminized Screen
Gray Filter Glass

6.3 Volt, 300 Ma. Heater
Electrostatic Focus
Twin-Face Panel
Integral Safety Glass

External Conductive Coating
Spherical Faceplate
No Ion Trap
15-1/4" × 19-5/16" Screen Size

ELECTRICAL

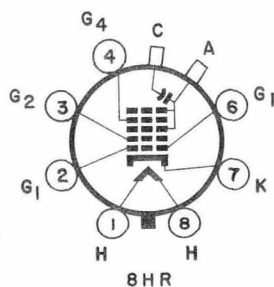
Focusing Method	Electrostatic
Deflection Method	Magnetic
Deflection Angles (Approx.):	
Horizontal	99 Degrees
Vertical	82 Degrees
Diagonal	110 Degrees
Direct Interelectrode Capacitances:	
Cathode to all other electrodes, (Approx.)	5 μf
Grid 1 to all other electrodes, (Approx.)	6 μf
External Conductive Coating to Anode:	
Maximum	2500 μf
Minimum	2000 μf
Heater Current at 6.3 Volts	300 $\pm$ 5% Ma.
Heater Warm-up Time (Note 1)	11 Seconds

OPTICAL

Phosphor Number	Aluminized P4
Light Transmittance at Center, approximate	40 Percent

MECHANICAL

Mounting Position	Any
Screen Dimensions:	
Screen Area	282 sq. in. Min.
Height	15-1/4" Min.
Width	19-5/16" Min.
Diagonal	22-5/16" Min.
Bulb Dimensions:	
Bulb	J187A1
Laminated Panel	FP198A1
Weight	31 lbs.
Height	17-5/16" + 1/8" - 1/16"
Width	21-5/16" + 1/8" - 1/16"
Diagonal	24-45/64" + 3/32" - 1/16"
Overall Length	14-3/16" $\pm$ 3/8"
Neck Length	4-1/8" $\pm$ 1/8"
Anode Terminal	Recessed Small Cavity Cap (JEDEC J1-21)
Base	Small Button 7-Pin (JEDEC B7-208)
Basing	8HR



RATINGS

Design Maximum System

Unless Otherwise Specified, Voltage Values are Positive with Respect to Grid 1.

Maximum Anode Voltage	22000	Volts
Minimum Anode Voltage (Note 2)	12000	Volts
Maximum Grid 4 Voltage (Focusing Electrode)	+1100, -550	Volts
Maximum Grid 2 Voltage	700	Volts
Cathode Voltage:		
Maximum Negative Value	0	Volts DC
Maximum Negative Peak Value	2	Volts
Maximum Positive 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	16000	Volts DC
Grid 4 Voltage (Focusing Electrode)	0 to 400	Volts DC
Grid 2 Voltage (Note 3)	400	Volts DC
Cathode Voltage for raster cutoff	36 to 78	Volts DC

LIMITING CIRCUIT VALUES

Maximum Grid 1 Circuit Resistance	1.5	Megohms
Minimum Grids 2 & 4 Circuit Resistance (Note 4)	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. In general, anode voltage should not be less than 12,000 volts.
3. It is recommended that not less than 300 volts on Grid 2 be used, as resolution is affected at lower voltages.
4. Protective resistance in the G2 and G4 circuits is advisable to prevent damage to the tube.



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