

23HUP4A

Picture Tube

PAN-0-PLY TYPE
LOW-VOLTAGE ELECTROSTATIC FOCUS

LOW-GRID-No.2 VOLTAGE
110° MAGNETIC DEFLECTION

ELECTRICAL

Direct Interelectrode Capacitances

Cathode to all other electrodes . . .	5	pF
Grid No.1 to all other electrodes . . .	6	pF
External conductive coating to anode. .	1700 min—2500 max	pF
Heater Current at 6.3 volts	450 ± 20	mA
Heater Warm-Up Time (Average)	11	s
Electron Gun.	Type Requiring No Ion-Trap Magnet	
Focus Lens.	Unipotential	

OPTICAL

Phosphor.	P4—Sulfide Type, Aluminized
For curves, see front of this section	
Faceplate	Filterglass
Light transmission at center (approx.).	42%

MECHANICAL

Weight (Approx.).	28 lb
Overall Length.	14.125 ± .281 in ←
Neck Length	4.375 ± .125 in ←
Projected Area of Screen.	282 sq in
External Conductive Coating ^a	

Type. Regular-Band
Contact area for grounding. Near Reference Line

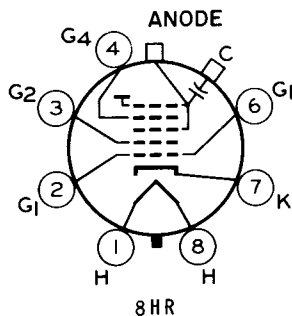
For Additional Information on Coatings and Dimensions

See *Picture-Tube Dimensional-Outlines* and *Bulb J187K* sheets at front of this section

Cap	Recessed Small Cavity (JEDEC No.J1-21)
Base.	Small-Button Neoeightar 7-Pin, Arrangement 1, (JEDEC No.B7-208)

TERMINAL DIAGRAM (Bottom View)

- Pin 1 —Heater
- Pin 2 —Grid No.1
- Pin 3 —Grid No.2
- Pin 4 —Grid No.4
- Pin 6 —Grid No.1
- Pin 7 —Cathode
- Pin 8 —Heater
- Cap —Anode (Grid No.3, Grid No.5, Screen, Collector)
- C —External Conductive Coating



← Indicates a change.



RADIO CORPORATION OF AMERICA
Electronic Components and Devices
Harrison, N. J.

DATA
7-67

23HUP4A

MAXIMUM AND MINIMUM RATINGS, DESIGN-MAXIMUM VALUES

*Unless otherwise specified, voltage values
are positive with respect to grid No.1*

Anode Voltage.	12000 min—23500 max	V
Grid-No.4 (Focusing) Voltage		
Positive value	1250 max	V
Negative value	400 max	V
Grid-No.2 Voltage.	20 min—60 max	V
Cathode Voltage		
Negative peak value.	2 max	V
Negative bias value.	0 max	V
Positive bias value.	100 max	V
Positive peak value.	150 max	V
Heater Voltage	5.7 min—6.9 max	V
Peak Heater-Cathode Voltage		
Heater negative with respect to cathode:		
During equipment warm-up period		
not exceeding 15 seconds.	450 max	V
After equipment warm-up period	300 max	V
Heater positive with respect to cathode:		
Combined AC and DC voltage	200 max	V
DC component	100 max	V

TYPICAL OPERATING CONDITIONS FOR CATHODE-DRIVE SERVICE

*Unless otherwise specified, voltage values
are positive with respect to grid No.1*

Anode Voltage.	18000	V
Grid-No.4 Voltage ^b	200	V
Grid-No.2 Voltage.	30	V
Cathode Voltage.	22 to 45	V
For visual extinction of focused raster		
Field Strength of required adjustable		
centering magnet.	0 to 12	G

MAXIMUM CIRCUIT VALUE

Grid-No.1-Circuit Resistance	1.5 max	MΩ
--	---------	----

^a Includes implosion protection hardware.

^b The grid-No.4 voltage required for optimum focus of any individual tube will have a value anywhere between 0 and +400 volts with the combined grid-No.1 voltage and video-signal voltage adjusted to give an anode current of 200 microamperes on a 13.5-inch by 18-inch pattern from an RCA-2F21 monoscope, or equivalent.

For X-radiation shielding considerations, see sheet
X-RADIATION PRECAUTIONS FOR CATHODE-RAY TUBES
at front of this section