

# 23GSP4

## Picture Tube

**PAN-O-PLY TYPE**      **LOW-VOLTAGE ELECTROSTATIC FOCUS**  
**NO ION-TRAP MAGNET REQUIRED**      **110° MAGNETIC DEFLECTION**

### 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
<b>Heater Current at 6.3 V . . . . .</b>	<b>600 ± 30</b>	<b>mA</b>
<b>Heater Warm-Up Time (Average) . . . . .</b>	<b>11</b>	<b>s</b>
<b>Electron Gun. . . . .</b>	<b>Type Requiring No Ion-Trap Magnet</b>	

### OPTICAL

**Phosphor. . . . .** .P4—Sulfide Type, Aluminized  
For curves, see front of this section

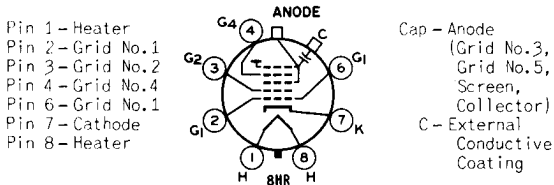
**Faceplate . . . . .** Filterglass  
Light transmission at center (Approx.). . . . . 42%

### MECHANICAL

<b>Weight (Approx.). . . . .</b>	<b>28 lb</b>
<b>Overall Length. . . . .</b>	<b>.14.875 ± .281 in</b>
<b>Neck Length . . . . .</b>	<b>5.125 ± .125 in</b>
<b>Projected Area of Screen. . . . .</b>	<b>282 sq in</b>
<b>External Conductive Coating<sup>a</sup></b>	

Type (See CRT OUTLINES 1 at front of this section) . . . **Regular-Band**  
 Contact area for grounding. . . . . **Near Reference Line**  
**Cap . . . . .** Recessed Small Cavity (JEDEC No. J1-21)  
**Base. . . . .** Small-Button Neoeightar 7-Pin, Arrangement 1, (JEDEC No. 87-208)

### TERMINAL DIAGRAM (BOTTOM VIEW)



### MAXIMUM AND MINIMUM RATINGS, DESIGN-MAXIMUM VALUES

*Voltages are positive with respect to cathode*

<b>Anode Voltage . . . . .</b>	<b>11000 min — 23000 max</b>	<b>V</b>
<b>Grid-No.4 Voltage</b>		
Positive value. . . . .	1100 max	V
Negative value. . . . .	550 max	V
<b>Grid-No.2 Voltage . . . . .</b>	<b>200 min — 550 max</b>	<b>V</b>
<b>Grid-No.1 Voltage</b>		
Negative peak value . . . . .	220 max	V
Negative bias value . . . . .	155 max	V
Positive bias value . . . . .	0 max	V
Positive peak value . . . . .	2 max	V
<b>Heater Voltage. . . . .</b>	<b>5.7 min — 6.9 max</b>	<b>V</b>



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## Peak Heater-Cathode Voltage

Heater negative with respect to cathode:			
During equipment warm-up period $\leq 15$ s. . . . .	450 max	V	
After equipment warm-up period. . . . .	300 max	V	
Heater positive with respect to cathode:			
Combined AC & DC voltage. . . . .	200 max	V	
DC component. . . . .	100 max	V	

## TYPICAL OPERATING CONDITIONS FOR CATHODE-DRIVE SERVICE

*Voltages are positive with respect to grid No.1*

Anode Voltage . . . . .	18000	V
Grid-No.4-Voltage <sup>b</sup> . . . . .	200	V
Grid-No.2 Voltage . . . . .	300	V
Cathode Voltage . . . . .	28 to 62	V

For visual extinction of focused raster

Field Strength. . . . .	0 to 12	G
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Of required adjustable centering magnet

### MAXIMUM CIRCUIT VALUE

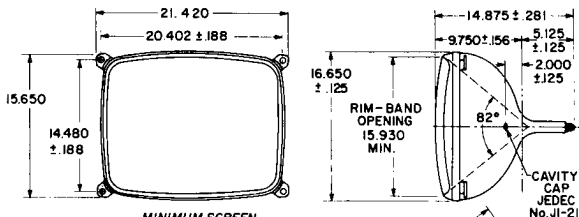
Grid-No.1 Circuit Resistance. . . . .	1.5 max	M $\Omega$
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<sup>a</sup> Includes implosion protection hardware.

<sup>b</sup> 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 13-1/2-inch by 18-inch pattern from an RCA-2F21 monoscope, or equivalent.

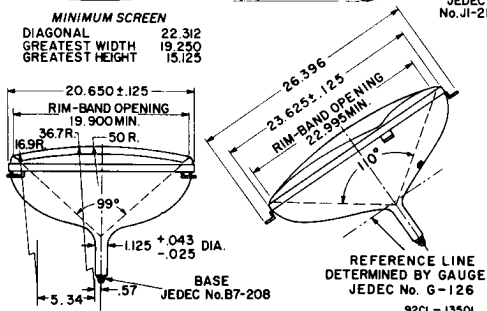
## DIMENSIONAL OUTLINE

FOR PICTURE TUBE UTILIZING BULB J187K WITH MOUNTING LUGS



**MINIMUM SCREEN**

DIAGONAL	22.312
GREATEST WIDTH	19.250
GREATEST HEIGHT	15.125



DIMENSIONS IN INCHES

