

11HP4
CATHODE RAY TUBE

11 INCH, RECTANGULAR, GLASS	FACEPLATE -- SPHERICAL GRAY
FOCUS -- ELECTROSTATIC	TENSION BAND IMPLOSION PROTECTION
DEFLECTION -- MAGNETIC	ALUMINIZED SCREEN
110 DEGREE DEFLECTION	EXTERNAL CONDUCTIVE COATING

-----DESCRIPTION AND RATING-----

The 11HP4 is an 11-inch electrostatic-focus and magnetic deflection glass lightweight picture tube employing tension banded type implosion protection. Other outstanding features include a short overall length, a small neck diameter and a non ion trap gun designed for operation at an intermediate Grid no. 2 voltage for use in cathode-drive circuits. The fluorescent screen is aluminized to increase light output and reduce undesirable screen charging. An external conductive coating is provided to serve as a filter capacitor when grounded.

ELECTRICAL DATA

Focusing Method	Electrostatic
Deflection Angle, Approximate	
Horizontal	99 degrees
Vertical	82 degrees
Diagonal	110 degrees
Direct Interelectrode Capacitance	
Cathode to all other electrodes, approx.	5 uuf
Grid #1 to all other electrodes, approx.	6 uuf
External Conductive Coating to Anode	750 max. uuf
	500 min. uuf
Heater Current at 6.3 volts	450 ± 23 ma.
Heater Warm-up Time	11 sec.

OPTICAL DATA

Phosphor Number	P4 Aluminized
Light Transmittance at Center (approximate)	52 Percent

CATHODE RAY TUBE DEPARTMENT



Syracuse, N. Y.

MECHANICAL DATA

Overall Length	8 15/16 $\pm$ 1/4 inches
Greatest Dimensions of Tube	
Diagonal	10.950 $\pm$.125 inches
Width	9.825 $\pm$.125 inches
Height	7.985 $\pm$.100 inches
Minimum Useful Screen Dimensions (projected)	
Diagonal	10 1/4 inches
Horizontal Axis	9 inches
Vertical Axis	7 1/16 inches
Area	60 sq. inches
Neck length	4 1/4 $\pm$ 1/8 inches
Bulb Contact	JEDEC No. J1-21
Base	JEDEC No. B7-208
Basing	8HR
Bulb Contact Alignment	
Anode Contact Aligns with Base Pin No. 4 $\pm$ 30 degrees	

RATINGS (Design Maximum System)

Unless otherwise specified, voltage values are positive and measured with respect to Grid No. 1.

Maximum Anode Voltage	15,000 volts
Minimum Anode Voltage	9,000 volts
Maximum Grid #4 (Focusing Electrode) Voltage	-500 to +1000 volts
Minimum Grid #2 Voltage	100 volts
Maximum Grid #2 Voltage	250 volts
Cathode Voltage	
Maximum Positive Value	140 volts DC
Maximum Positive Peak Value	200 volts
Maximum Negative Value	0 volts DC
Maximum Negative Peak Value	2 volts
Maximum Heater Voltage	6.9 volts
Minimum Heater Voltage	5.7 volts
Maximum Heater-Cathode Voltage	
Heater Negative with respect to Cathode	
During Warm-up period not to exceed 15 sec	410 volts
After equipment warm-up period	200 volts
Heater Positive with respect to Cathode	200 volts

TYPICAL OPERATING CONDITIONS (Cathode-Drive Service)

Anode Voltage	11,000 volts DC
Grid #4 Voltage (Focusing Electrode, Note 2)	0 volts DC
Grid #2 Voltage	150 volts DC
Cathode to Grid #1 Voltage for cut-off (Note 1).	.31 to 49 volts

MAXIMUM CIRCUIT VALUES

Maximum Grid #1 Circuit Resistance 1.5 max. megohm
Grid #2 Circuit Resistance 0.1 min. megohm
Focusing Electrode Circuit Resistance 0.1 min. megohm

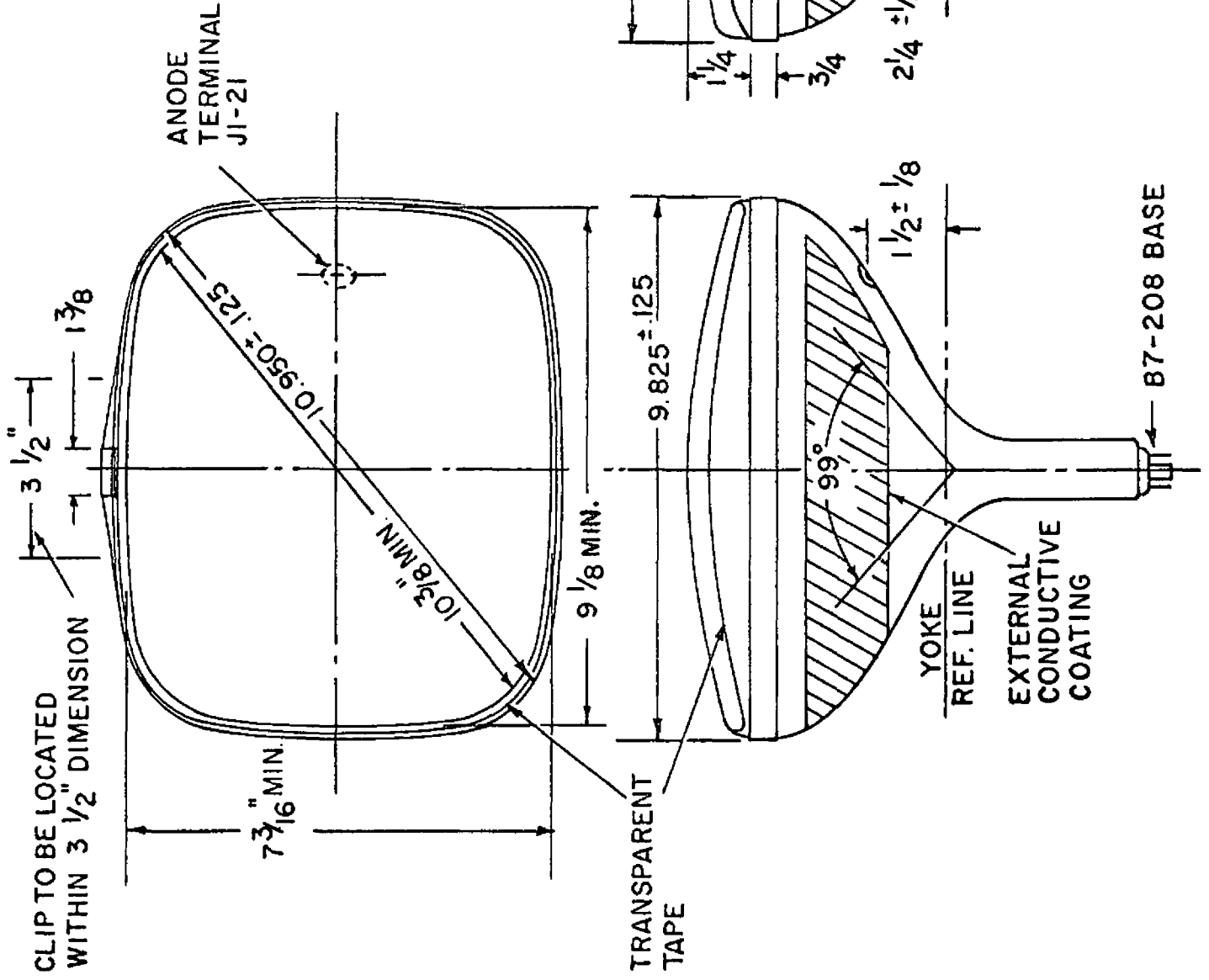
Protective resistance in Grid #2 and focusing electrical circuits is advisable to prevent damage to tube. If applicable, one resistor common to both circuits may be used.

NOTES:

1. Visual extinction of focused raster.
2. With the combined Grid #1 bias voltage and video-signal voltage adjusted to give an anode current of 150 ua on a 9" x 7 1/16" pattern from RCA 2F21 monoscope or equivalent.

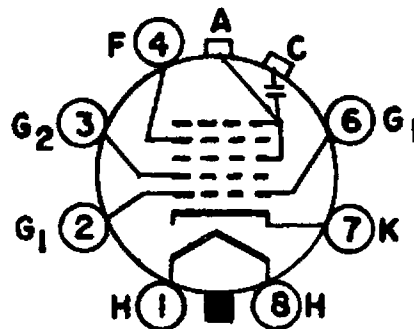
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MINIMUM SCREEN DIMENSIONS
 DIAGONAL — 10 1/4 IN.
 WIDTH — 9 IN.
 HEIGHT — 7 1/16 IN.
 AREA — 60 SQ. IN.



OUTLINE NOTES

1. The reference line is determined by the intersection of the plane C-C of gage (EIA No. 126) with the glass funnel.
2. Deflection angle on the diagonal is 110° .
3. Anode terminal aligns with pin no. 4 ± 30 degrees.
4. Use a non-rigidly mounted socket with flexible leads. Bottom circumference of base wafer will fall within 1-3/4 inch diameter circle concentric with the bulb axis.



BASING DIAGRAM
8 HR