

16BYP4  
CATHODE RAY TUBE

16 INCH, RECTANGULAR, GLASS	FACE PLATE -- SPHERICAL GRAY
FOCUS -- ELECTROSTATIC	NON ION TRAP GUN
DEFLECTION -- MAGNETIC	ALUMINIZED SCREEN
114 DEGREE DEFLECTION ANGLE	EXTERNAL CONDUCTIVE COATING

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-----DESCRIPTION AND RATING-----  
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The 16BYP4 is a 16-inch rectangular glass picture tube employing banded type implosion protection. Outstanding features include a non-ion-trap gun, a 450 ma heater and a small neck diameter. The fluorescent screen is aluminized to increase light output and reduce undesirable screen charging. An external conductive coating serves as a filter capacitor when grounded and contributes to the reduction of sweep induced radiation.

ELECTRICAL DATA

Focusing Method . . . . .	Electrostatic
Deflection Angle, Approximate	
Horizontal . . . . .	.102 degrees
Vertical . . . . .	.84 degrees
Diagonal . . . . .	.114 degrees
Direct Interelectrode Capacitance	
Cathode to all other electrodes, approximate	.5 $\mu$ f
Grid #1 to all other electrodes, approximate	.6 $\mu$ f
External Conductive Coating to Anode . . . . .	.1500 max. $\mu$ f
	1000 min. $\mu$ f
Heater Current at 6.3 volts . . . . .	450 $\pm$ 23 ma.
Heater Warm-up time . . . . .	11 sec.

OPTICAL DATA

Phosphor Number . . . . .	P4 Aluminized
Light transmittance at center approx. . . . .	54 percent

CATHODE RAY TUBE DEPARTMENT

**GENERAL  ELECTRIC**

Syracuse, N. Y.

MECHANICAL DATA

Overall Length . . . . .	10 7/16 <sup>±</sup> 1/4 inches
Greatest Dimensions of Tube	
Diagonal . . . . .	15.688 <sup>±</sup> .100 inches
Width . . . . .	13.780 <sup>±</sup> .100 inches
Height . . . . .	11.187 <sup>±</sup> .100 inches
Minimum Useful Screen Dimensions (Projected)	
Diagonal . . . . .	14 7/8 inches
Horizontal Axis . . . . .	12 15/16 inches
Vertical Axis . . . . .	10 1/4 inches
Area . . . . .	125 sq. inches
Neck Length . . . . .	4 1/4 <sup>±</sup> 1/8 inches
Bulb . . . . .	J125-B1
Bulb Contact . . . . .	JEDEC No. J1-21
Base . . . . .	JEDEC No. B7-208
Basing . . . . .	8 HR
Bulb Contact Alignment	
Anode Contact Aligns with Pin No. 4 <sup>±</sup>	30 degrees

RATINGS (Design Maximum System)

Unless otherwise specified, voltage values are positive and measured with respect to cathode.

Maximum Anode Voltage . . . . .	16,000 volts
Minimum Anode Voltage . . . . .	10,000 volts
Maximum Grid 4 (Focusing Electrode) Voltage . . .	-500 to +1000 volts
Minimum Grid 2 Voltage . . . . .	75 volts
Maximum Grid 2 Voltage . . . . .	200 volts
Grid #1 Voltage	
Maximum Negative Value . . . . .	140 volts DC
Maximum Negative Peak Value . . . . .	200 volts
Maximum Positive Value . . . . .	0 volts DC
Maximum Positive 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 . . . . .	180 volts
Heater positive with respect to cathode . . . .	180 volts

TYPICAL OPERATING CONDITIONS (Cathode Drive Service)

Anode Voltage . . . . .	13,000 volts DC
Grid #4 Voltage (Focusing Electrode, Note 2) . .	0 volts DC
Grid #2 Voltage . . . . .	100 volts DC
Cathode to Grid #1 Voltage (Note 1) . . . . .	31 to 49 volts DC

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

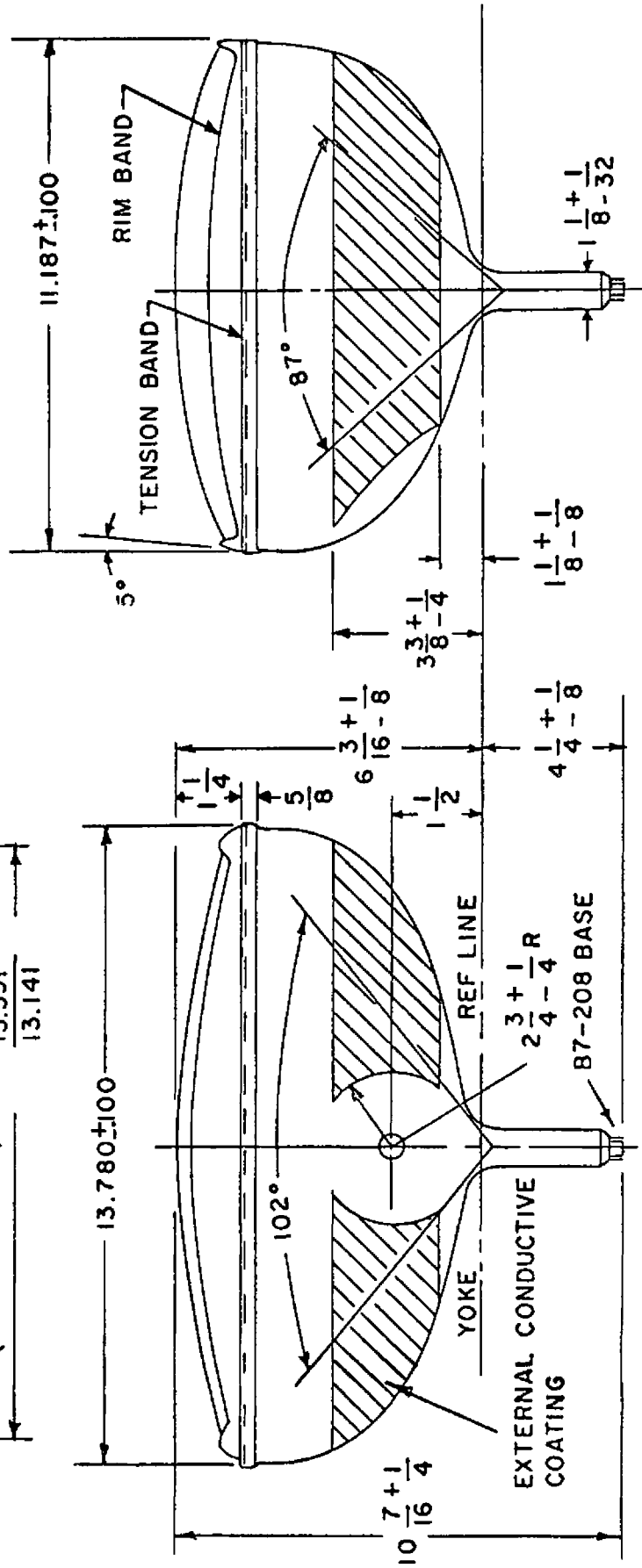
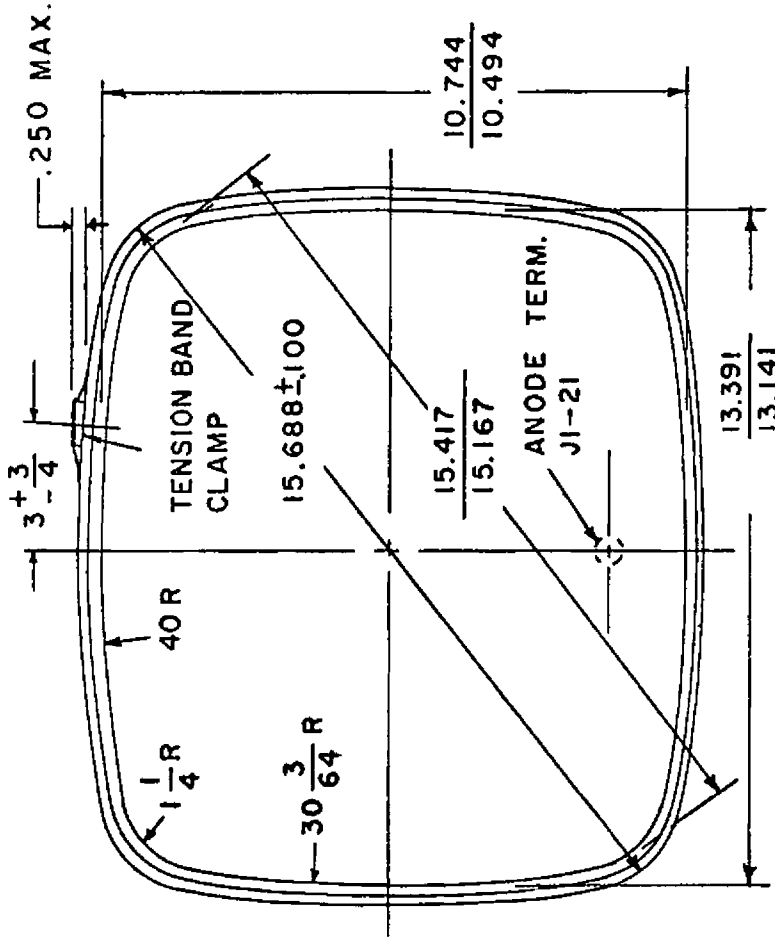
Protective resistance in Grid No. 2 and focusing electrical circuits is advisable to prevent damage to tube. If applicable, one resistor common to both circuits may be used.

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 microamperes on a 12 15/16 x 10 1/4" pattern from RCA 2F21 monoscope or equivalent.

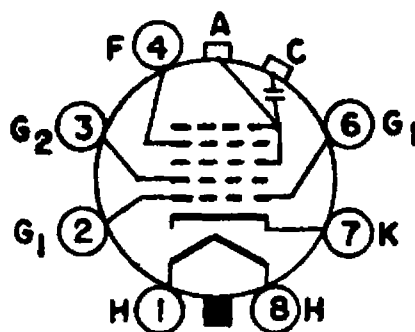
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SCREEN DIMENSIONS	
DIAGONAL	14 7/8
WIDTH	12 15/16
HEIGHT	10 1/4
AREA	125 SQ. IN.



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  $114^{\circ}$ .
3. Anode terminal aligns with pin no. 4  $\pm 30$  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**