16BUP4
CATHODE RAY TUBE

16 INCH, RECTANGULAR, GLASS

FOCUS -- ELECTROSTATIC

DEFLECTION -- MAGNETIC

114 DEGREE DEFLECTION

FACE PLATE -- SPHERICAL GRAY

INTEGRAL PLASTIC IMPLOSION BARRIER

ALUMINIZED SCREEN

EXTERNAL CONDUCTIVE COATING

DESCRIPTION AND RATING

The 16BUP4 is a 16 inch electrostatic focus and magnetic deflection glass lightweight picture tube employing an integral plastic implosion barrier. Other outstanding features include a short over-all 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	102 degrees
Vertical	84 degrees
Diagonal	114 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	1500 max. uuf 1000 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)	48 Percent

CATHODE RAY TUBE DEPARTMENT

GENERAL ELECTRIC

Syracuse, N. Y.

from JEDEC release #4804, Sept. 21, 1964

MECHANICAL DATA

Overall Length	10-3/8 ± 1/4 inches
Greatest Dimensions of Tube	
Diagonal	15-11/16 + 5/32 inches - 1/8
Width	13-3/4 ± 1/8 inches
Height	11-5/32 ± 1/8 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 ± 1/8 inches
Bulb	J125A1
Bulb Contact	JEDEC No. J1-21
Base	JEDEC No. B7-208
Basing	8HR
Bulb Contact Alignment	
Anode Contact Aligns with Base Pin No. 4 ± 30 degrees	

RATINGS (Design Maximum System)

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

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
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	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, Notes 2 & 3)	0 volts DC
Grid #2 Voltage	100 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 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.

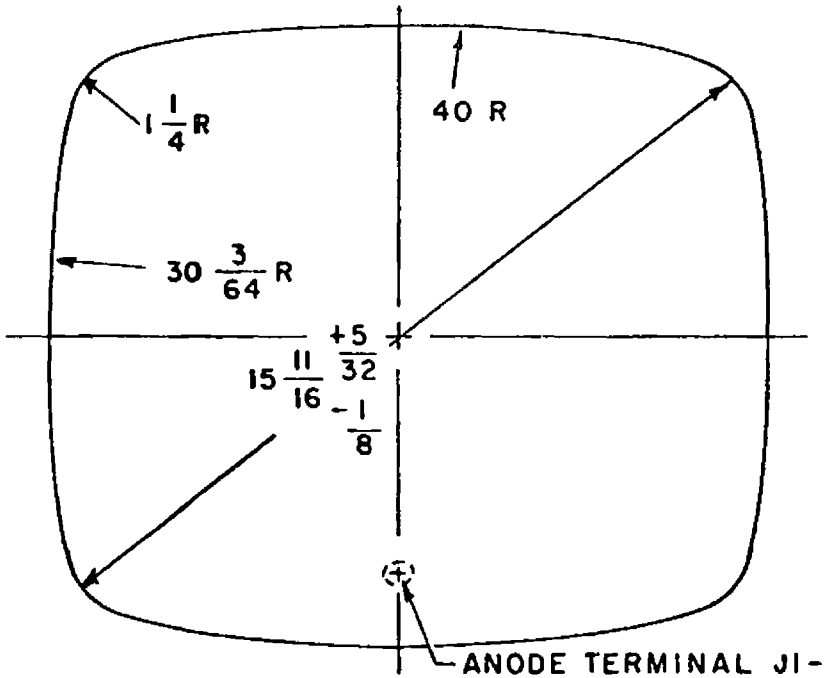
2. With the combined Grid #1 bias voltage and video-signal voltage adjusted to give an anode current of 150 ua on a 12-15/16" x 10-1/4" pattern from RCA 2F21 monoscope or equivalent.

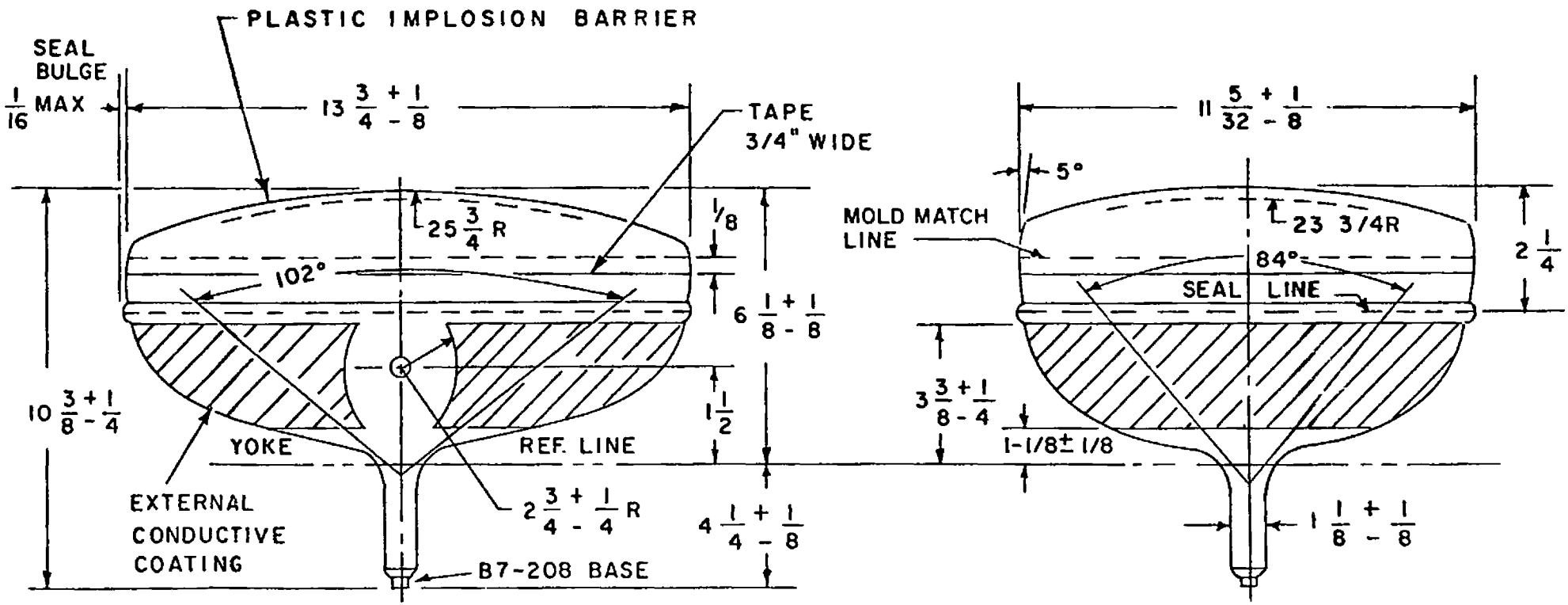
3. Individual tubes will have satisfactory focus at 0 volts.

16BUP4

SCREEN DIMENSIONS

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





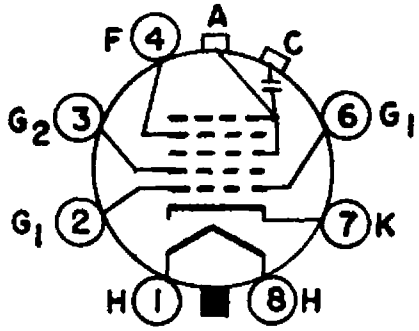
OUTLINE NOTES

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°

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

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