

23FVP4

CATHODE RAY TUBE

23 INCH, RECTANGULAR, GLASS	FACEPLATE--SPHERICAL GRAY
FOCUS--ELECTROSTATIC	NON ION TRAP GUN
DEFLECTION--MAGNETIC	ALUMINIZED SCREEN
110-DEGREE DEFLECTION ANGLE	EXTERNAL CONDUCTIVE COATING
BANDED TYPE IMPLOSION PROTECTION	

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

The 23FVP4 is a 23-inch electrostatic-focus and magnetic-deflection glass light weight picture tube equipped with banded tube type integral implosion protection. Outstanding features include a short overall length, a small neck diameter and a non ion-trap gun. 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	2500 max. uuf
(including implosion protection hardware)	2000 min. uuf
Heater Current at 6.3 volts	450 $\pm$ 22 ma.
Heater Warm-up time	11 sec.

OPTICAL DATA

Phosphor Number	P4 Aluminized
Light transmittance at center, approx.	.42 percent

CATHODE RAY TUBE DEPARTMENT

GENERAL  ELECTRIC
Syracuse, N. Y.

MECHANICAL DATA

Overall Length	14-7/8 $\pm$ 5/16 inches
Greatest Dimensions of Tube	
Diagonal.	23-1/2 $\pm$ 1/8 inches
Width	20-5/8 $\pm$ 1/8 inches
Height.	16-5/8 $\pm$ 1/8 inches
Minimum Useful Screen Dimensions (Projected)	
Diagonal.	22-5/16 inches
Horizontal Axis	19-1/4 inches
Vertical Axis	15-1/8 inches
Area.	282 square inches
Neck Length	5-1/8 $\pm$ 1/8 inches
Bulb.	J187K1
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 cathode.

Maximum Anode Voltage	22,000 volts
Minimum Anode Voltage	15,000 volts
Maximum Grid #4 (Focusing Electrode) Voltage.	-500 to +1000 volts
Minimum Grid #2 Voltage	100 volts
Maximum Grid #2 Voltage	550 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

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Syracuse, N. Y.

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 300 volts

Heater positive with respect to cathode. 180 volts

TYPICAL OPERATING CONDITIONS (Cathode Drive Service)

Anode Voltage. 18,000 volts DC

Grid #4 Voltage (Focusing Electrode-Notes 2 & 3) 250 volts DC

Grid #2 Voltage. 300 volts DC

Cathode to Grid #1 Voltage (Note 1). 36 to 54 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

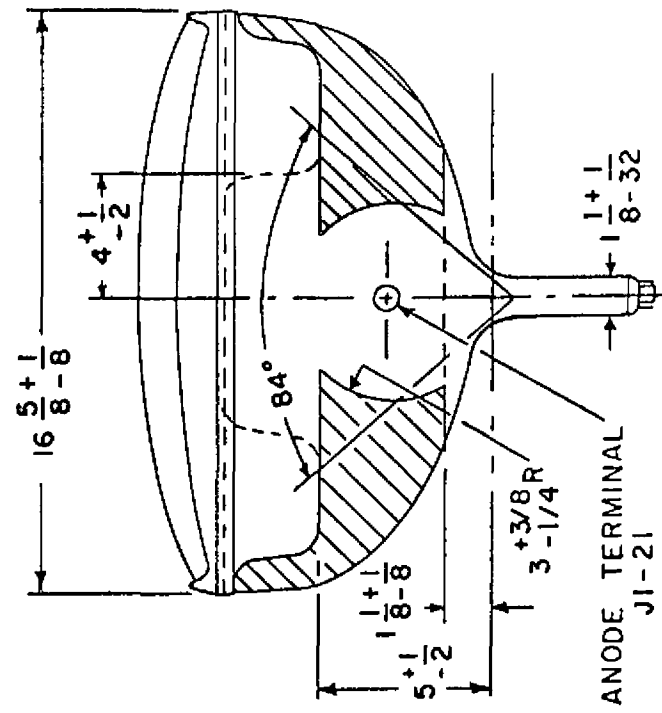
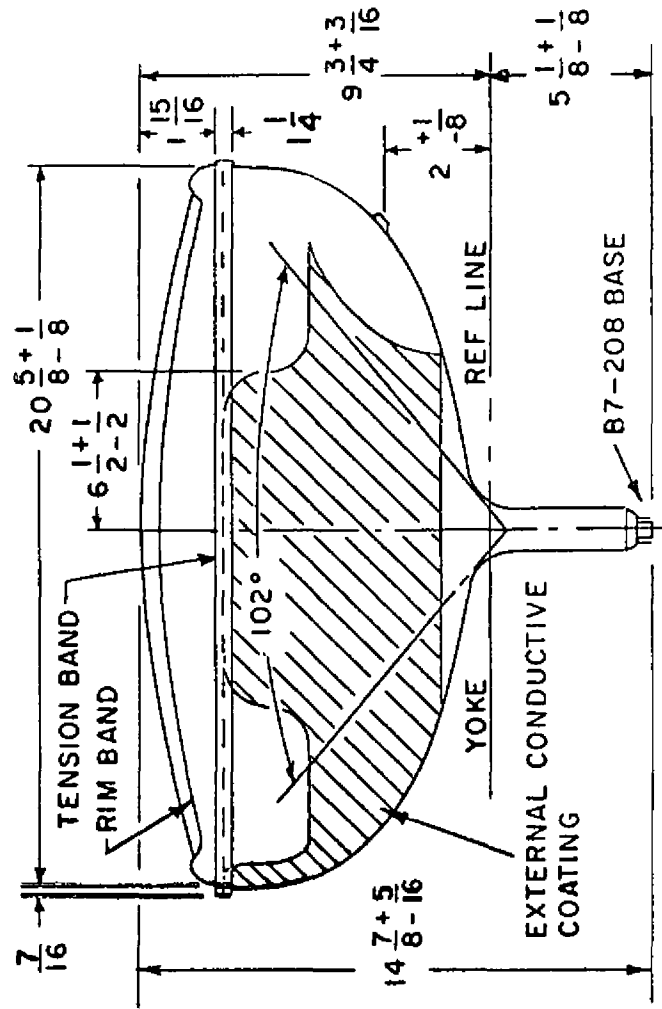
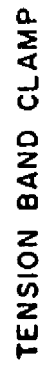
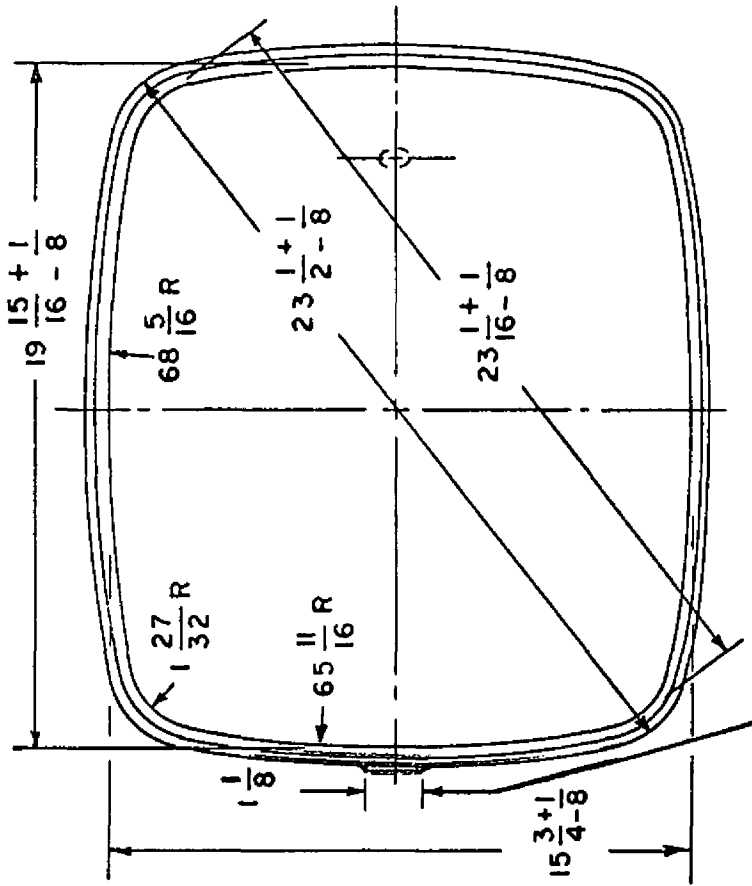
Protective resistance in Grid #2 and focusing electrical circuits is advisable to prevent damage to tube. If applicable, one resistor common to both circuits may be used.

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 μ a on a 19-1/4" x 15-1/8" pattern from RCA 2F21 monoscope or equivalent.
3. Individual tubes will have satisfactory focus at some value between 0 and 500 volts.

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SCREEN DIMENSIONS	
DIAGONAL	22 5/16
WIDTH	19 1/4
HEIGHT	15 1/8
AREA	282 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.

