

24AWP4

# National Video Corporation

4300 W. 47TH STREET CHICAGO 32, ILLINOIS  
CLIFFSIDE 4-5600

The type 24AWP4 is a low voltage electrostatic focus, magnetic deflection picture tube for television applications. It has a short, non-ion trap type gun in a 4 1/2" neck. It also has a rectangular glass bulb with a gray glass faceplate and the screen is aluminized for increased light output.

## GENERAL CHARACTERISTICS

Focusing Method	Electrostatic
Deflection Method	Magnetic
Deflection Angle (Approx.)	
Horizontal	105 Degrees
Diagonal	110 Degrees
Vertical	87 Degrees
Face Plate Light Transmission (Neutral Density Filter)	74% Approx.
Phosphor	No. 4
Fluorescence	White
Persistence	Medium
Direct Interelectrode Capacitances (Approx.)	
Cathode to all other electrodes	5 uuf
Grid No. 1 to all other electrodes	6 uuf
External conductive coating to anode	2500 Max. uuf 2000 Min. uuf

## MECHANICAL DATA

Overall Length	14 7/8 ± 3/8	Inches
Greatest Dimensions of Bulb:		
Diagonal	24	Inches
Width	22 11/16	Inches
Height	18 1/2	Inches
Screen Dimensions:		
Diagonal	22 13/16	Inches
Width	21 7/16	Inches
Height	16 7/8	Inches
Screen Area	332	Sq. Inches
Bulb Contact	J1-21	
Bulb No.	J192C1	
Base	B7-183	
Easing	8HR	
Bulb Contact Alignment		
J1-21 Contact aligns with Pin Position No. 4	± 30	Degrees

MAXIMUM RATINGS Design Center Values

Heater Voltage	6.3	Volts
Heater Current	.6	Amperes
Anode Voltage <sup>1</sup>	20,000	Max. Volts D.C.
Grid No. 4 Voltage	-500 to +1,000	Max. Volts D.C.
Grid No. 2 Voltage	500	Max. Volts D.C.
Grid No. 1 Voltage		
Negative Bias Value	140	Max. Volts D.C.
Positive Bias Value	0	Max. Volts D.C.
Positive Peak Value	2	Max. Volts D.C.

## Peak Heater - Cathode Voltage

Heater negative with respect to cathode during warm-up period not to exceed 15 seconds	410	Max. Volts D.C.
After equipment warm-up	180	Max. Volts D.C.
Heater positive with respect to cathode	180	Max. Volts D.C.

TYPICAL OPERATING CONDITIONS

Anode Voltage <sup>2</sup>	16,000	Volts D.C.
Grid No. 4 Voltage <sup>3</sup>	0 to 400	Volts D.C.
Grid No. 2 Voltage	300	Volts D.C.
Grid No. 1 Voltage <sup>4</sup>	-28 to -72	Volts D.C.

MAXIMUM CIRCUIT VALUES

Grid No. 1 Circuit Resistance	1.5	Max. Megohms
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NOTES

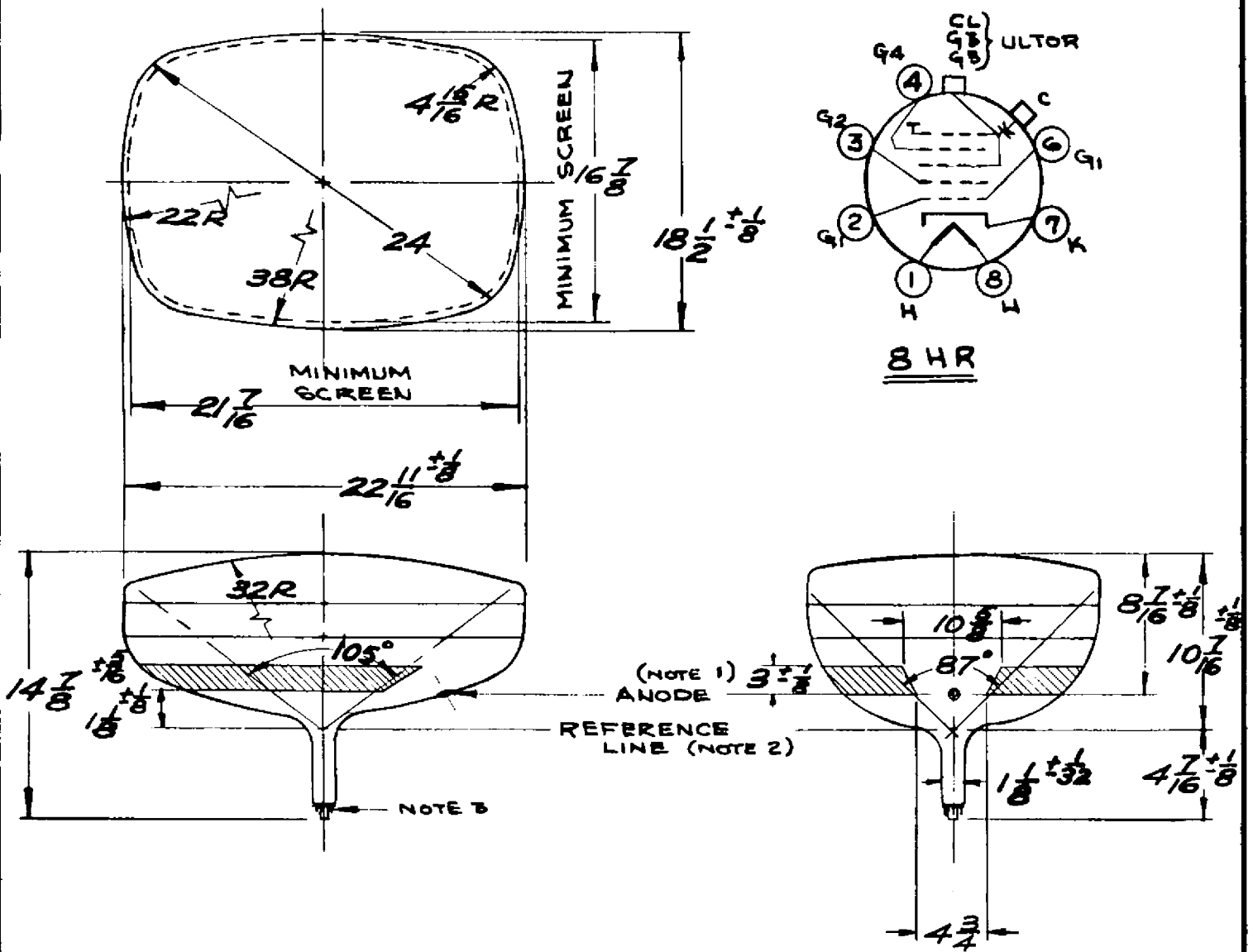
<sup>1</sup>Grid No. 5, Grid No. 3, and the collector are connected together within the tube, are referred to herein as anode.

<sup>2</sup>This tube will not provide satisfactory performance at anode voltage below 12 KV.

<sup>3</sup>For focus with anode current of 100 ua and 21 7/16" x 16 7/8" raster.

<sup>4</sup>Visual extinction of focused raster.

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NATIONAL VIDEO CORP.  
CHICAGO 32. ILL.

SUPERSEDES	ORIGINAL	DRAWING N <sup>o</sup>
DRAWN BY	SCALE	EFFECTIVE DISTRIBUTION
R. LARSON	1" - 8"	5-21-58

NOTES

- NOTE 1: The plane through the tube axis and pin No. 4 may vary from the plane through the tube axis and ultor terminal by angular tolerance (measured about the tube axis) of  $\pm 30^\circ$ . Ultor terminal is on the same side as pin No. 4.
- NOTE 2: With the tube neck inserted through flared end of reference line gauge JETEC No. 126 and with the tube seated in gauge, the reference line is determined by the intersection of the plane CC' of the gauge with the glass funnel.
- NOTE 3: Socket for this base should not be rigidly mounted; it should have flexible leads and be free to move.
- NOTE 4: External conductive coating must be grounded.