

National Video Corporation

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

The type 21DMP₄ is an electrostatic focus 110° magnetic deflection direct view, lightweight picture tube. The faceplate is made of gray filter glass and has a spherical contour. It also has an aluminized screen and an external conductive coating. No ion trap is required for this 4 1/2" neck length tube.

GENERAL CHARACTERISTICS

Focusing Method	Electrostatic
Deflection Method	Magnetic
Deflection Angle (Approx.)	Horizontal 105 Degrees
	Vertical 87 Degrees
	Diagonal 110 Degrees
Face Plate Light Transmission (Neutral Density Filter)	76% Approx.
Phosphor	P ₄
Fluorescence	White
Persistence	Short - 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	13 3/4 ± 3/8	Inches
Greatest Dimensions of Bulb:		
Diagonal	21 3/8 ± 1/8	Inches
Width	20 1/4 ± 1/8	Inches
Height	16 3/8 ± 1/8	Inches
Minimum Useful Screen Dimensions (Max. Assured)		
Screen Area	262	Sq. Inches
Diagonal	20 1/4	Inches
Width	19 1/16	Inches
Height	15 1/16	Inches
Bulb Contact	J1-21	
Base	E7-183	
Basing	8HR	
Bulb No.	J 17101	
Weight (Approx.)	20	Lbs.

MAXIMUM RATINGS Design Center Values

Heater Voltage	6.3	Volts
Heater Current	0.6 + 5%	Amperes
Anode Voltage	20,000	Volts D.C.
Grid No. 4 Voltage	-500 to +1,000	Volts D.C.
Grid No. 2 Voltage	500	Volts D.C.
Grid No. 1 Voltage		
Negative Peak Value	200	Volts
Negative Bias Value	140	Volts D.C.
Positive Bias Value	0	Volts D.C.
Positive Peak Value	2	Volts
Peak Heater-Cathode Voltage		
Heater negative with respect to cathode		
during warm-up period not to exceed 15 seconds	410	Volts D.C.
After equipment warm-up	180	Volts
Heater positive with respect to cathode	180	Volts

TYPICAL OPERATING CONDITIONS

Anode Voltage	16,000	Volts D.C.
Grid No. 4 Voltage for focus ¹	-50 to +350	Volts D.C.
Grid No. 2 Voltage	400	Volts D.C.
Grid No. 1 Voltage required for cut-off ²	-36 to -92	Volts D.C.

MAXIMUM CIRCUIT VALUES

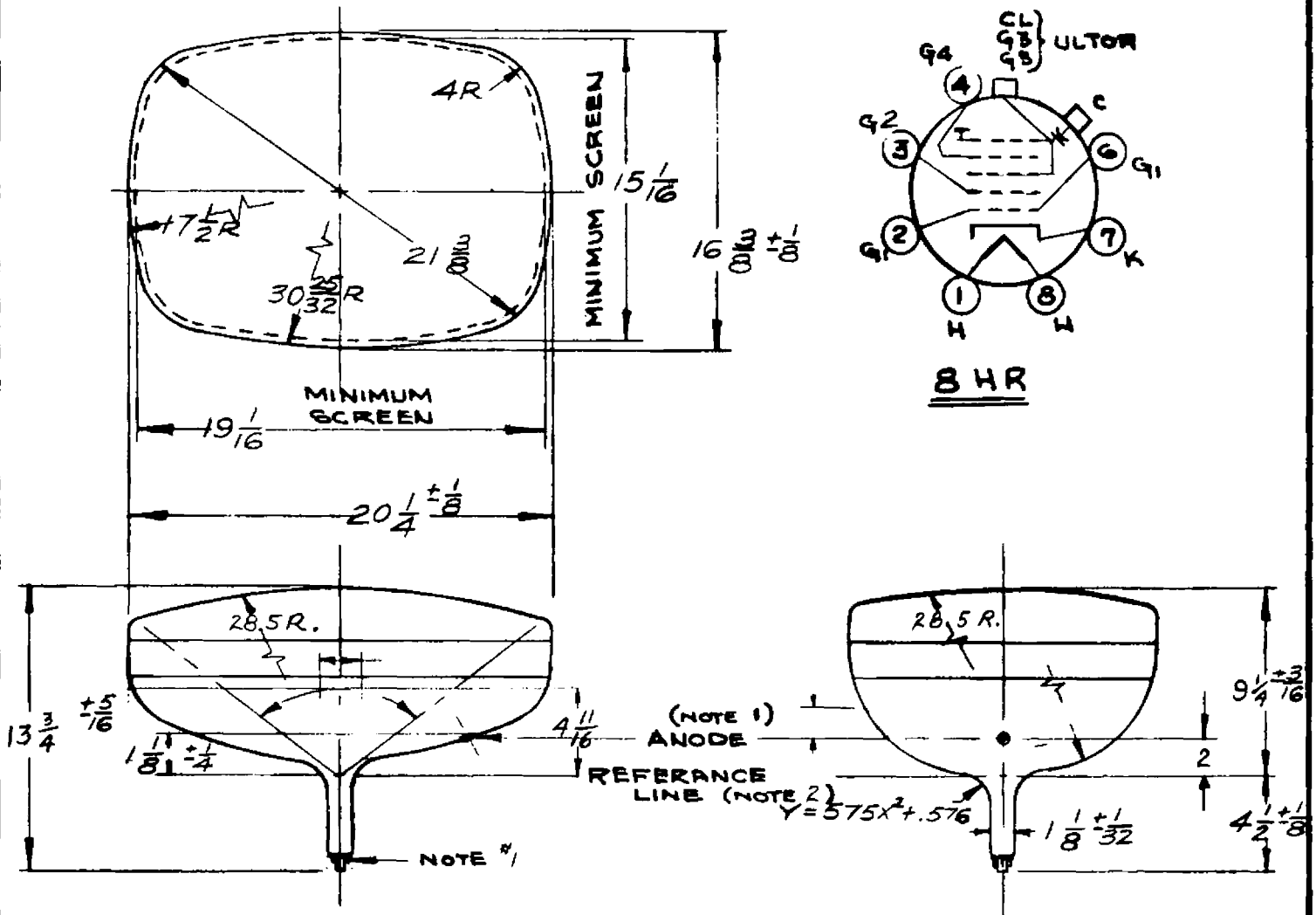
Grid No. 1 Circuit Resistance	1.5	Max. Megohms
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NOTES

¹With the combined grid No. 1 bias voltage and video signal adjusted to produce an anode current of 100 ua on a 15 1/16 x 19 1/16 inch picture adjusted for best overall focus. For other anode voltages, the focus voltage will be from -0.4% to +2.2%.

²Visual extinction of focused raster. Extinction of stationary focused spot will require that these values be about 5 volts more negative.

21DMP4



NATIONAL VIDEO CORP.
CHICAGO 32. ILL.

SUPERSEDES	ORIGINAL	DRAWING N ^o
DRAWN BY	SCALE	EFFECTIVE
DISTRIBUTION		
R. LARSON	1" - 8"	1 - 24 - 58
		A, B, C, D, E, F, G, H

NOTES

NOTE 1: The plane through the tube axis and pin position 4 aligns with the anode contact $\pm 30^\circ$.

NOTE 2: Reference line is determined by plane CC' of JETEC No. 126 reference line gauge when the gauge is seated against the bulb.

WARNING: X-ray radiation shielding may be necessary to protect against possible danger of personal injury from prolonged exposure at close range if this tube is operated at voltages higher than 16,000 volts.