# engineering data service

24ASP4

# ADVANCE DATA

# CHARACTERISTICS

# GENERAL DATA

Focusing Method	Electrostatic	
Deflection Method	Magnetic	
Deflection Angles (approx.)	_	
Horizontal	85	Degrees
Diagonal	90	Degrees
Phosphor	Aluminized P4	_
Fluorescence	White	
Persistence	Short to Medium	
Faceplate	Gray Filter Glass	
Light Transmittance (approx.)	74	Percent

# ELECTRICAL DATA

Heater Voltage		Volts	
	± 5%	Ampere	
Heater Warm-up Time 1	n	Seconds	
Direct Interelectrode Capacitances (approx.)			
Cathode to All Other Electrodes	5	$\mu\mu$ £	
Grid No. 1 to All Other Electrodes		μμ£	
External Conductive Coating to Anode 2	2500	μμξ	Max.
	1700	ЩLÍ	Min.

# MECHANICAL DATA

Minimum Useful Screen Dimensions	21 7/16 x 16 7/8	Trobes
(Maximum Assured)		
Minimum Useful Screen Area	332	Sq. Inches
Bulb	J192A or J192B	
Bulb Contact (Recessed Small Cavit	y Cap) J1-21	
Base	B6-63	
Basing	12L	
ים .	A TITATO C	

#### RATINGS

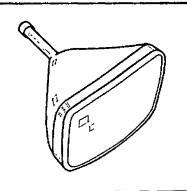
# MAXIMUM RATINGS (Absolute Maximum Values)

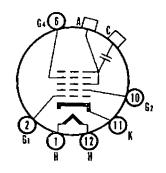
Anode Voltage	22,000	Volts	dc
Grid No. 4 Voltage (Focusing Electrode) Grid No. 2 Voltage	-550 to +1100 550	Volts Volts	de de
Grid No. 1 Voltage	155	Volts	dc
Negative Bias Value Negative Peak Value		Volts	uc
Positive Bias Value	0	Volts	dc
Positive Peak Value Peak Heater-Cathode Voltage Heater Negative with respect to Cath During Warm-up Period not to Excee	2 node nd	Volts	
15 Seconds  After Equipment Warm-up Period  Heater Positive with Respect to Catl	450	Volts Volts Volts	

from JETEC release #2095, Feb. 3, 1958

# QUICK REFERENCE DATA

Television Picture Tube
24" Direct Viewed
Rectangular Glass Type
Spherical Faceplate
Gray Filter Glass
Aluminized Screen
Electrostatic Focus
90° Magnetic Deflection
Short Neck Tube
No Ion Trap
External Conductive Coating
6.3 Volt, 300 Ma Heater





17-L

SYLVANIA ELECTRIC PRODUCTS INC.

TELEVISION PICTURE TUBE DIVISION

SENECA FALLS, NEW YORK

Prepared and Released By The TECHNICAL PUBLICATIONS SECTION EMPORIUM, PENNSYLVANIA

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#### TYPICAL OPERATING CONDITIONS

Anode Voltage	18,000	Volts	dc
Grid No. 4 Voltage for Focus	0 to +400		
Grid No. 2 Voltage		Volts	de
Grid No. 1 Voltage Required for Cutoff	-35 to -72		de

# CIRCUIT VALUES

Grid No. 1 Circuit Resistance

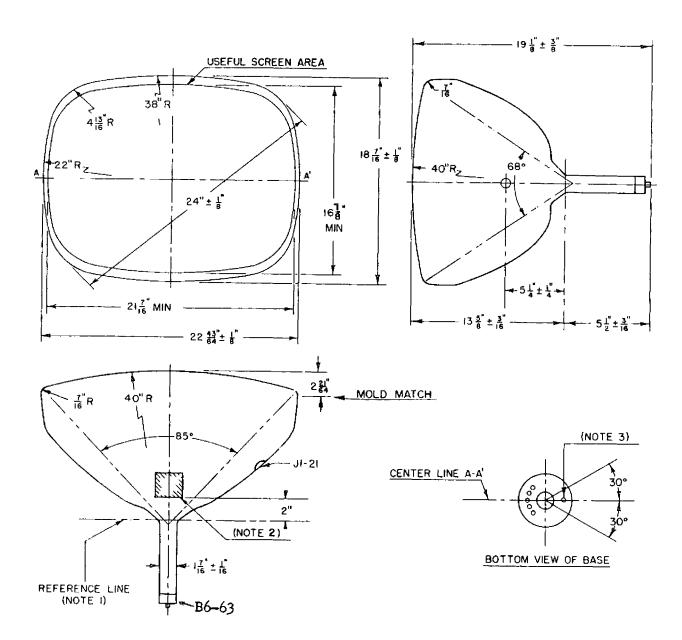
1.5 Megohms Max.

# NOTES:

- 1. Heater warm-up time is the time required for the voltage across the heater terminals to reach 80% of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times rated heater voltage divided by rated heater current.
- 2. External conductive coating must be grounded.
- 3. Visual extinction of focused raster. Extinction of stationary focused spot will require that these values be about 5 volts more negative.

# 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 higher than the manufacturer's Maximum Rated Anode Voltage or 16,000 volts, whichever is less.



# DIAGRAM NOTES:

- 1. Reference line is determined by the plane C-Cl of the reference line gauge (JETEC No. 116) when the gauge is seated against the bulb.
- Contact area for external conductive coating, 2" x 2", located 90° counterclockwise from anode contact as viewed from base end of tube.
- 3. Anode contact aligns with pin position No. 6  $\pm 30$  degrees.