

TUNG-SOL

CATHODE RAY

THE 21BDP4 IS A DIRECT VIEW PICTURE TUBE DESIGNED FOR TELEVISION APPLICATIONS. ITS FEATURES INCLUDE:

ALUMINIZED SCREEN	ELECTROSTATIC FOCUS
MAGNETIC DEFLECTION	UNIPOTENTIAL CATHODE
GRAY FILTER FACEPLATE	19 1/8" X 15" RASTER SIZE
EXTERNAL CONDUCTIVE COATING	RECTANGULAR GLASS CONSTRUCTION
DOES NOT REQUIRE ION TRAP	

ELECTRICAL DATA

		ELECTROSTATIC
FOCUSING METHOD		
DEFLECTING METHOD		MAGNETIC
DEFLECTION ANGLE (APPROX.):		
HORIZONTAL	67	DEGREES
VERTICAL	53	DEGREES
DIAGONAL	72	DEGREES
DIRECT INTERELECTRODE CAPACITANCES (APPROX.):		
CATHODE TO ALL OTHER ELECTRODES	5	μf
GRID #1 TO ALL OTHER ELECTRODES	6	μf
MAXIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	750	μf
MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	500	μf

OPTICAL DATA

	SULFIDE TYPE	
PHOSPHOR NUMBER		P-4
FLUORESCENT COLOR		WHITE
PHOSPHORESCENT COLOR		WHITE
PERSISTENCE		SHORT
FACEPLATE TRANSMISSION AT CENTER (APPROX.):	71	PERCENT

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

HEATER VOLTAGE	6.3	VOLTS
HEATER CURRENT	0.6 $\pm 10\%$	AMP.
MAXIMUM DC ANODE VOLTAGE	20 000	VOLTS
MAXIMUM DC GRID #4 VOLTAGE	-500 TO +1000	VOLTS
MAXIMUM DC GRID #2 VOLTAGE	500	VOLTS
MAXIMUM GRID #1 VOLTAGE:		
DC NEGATIVE-BIAS VALUE	125	VOLTS
DC POSITIVE-BIAS VALUE	0	VOLTS
POSITIVE-PEAK VALUE	2	VOLTS
MAXIMUM DC PEAK HEATER-CATHODE VOLTAGE: ^A		
HEATER NEGATIVE WITH RESPECT TO CATHODE		
DURING WARM-UP PERIOD NOT TO EXCEED 15 SECONDS	410	VOLTS
AFTER EQUIPMENT WARM-UP PERIOD	180	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE	180	VOLTS
MAXIMUM GRID #1 CIRCUIT RESISTANCE	1.5	MEGOHMS

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC ANODE VOLTAGE ^B	16 000	VOLTS
DC GRID #4 VOLTAGE	+50 TO +550	VOLTS
DC GRID #2 VOLTAGE	300	VOLTS
DC GRID #1 VOLTAGE ^C	-28 TO -72	VOLTS
DC GRID #4 CURRENT	-15 TO +25	$\mu\text{AMP.}$

^A CATHODE SHOULD BE RETURNED TO ONE SIDE OR TO THE WIDTAP OF THE HEATER TRANSFORMER WINDING.

^B BRILLIANCE AND DEFINITION DECREASE WITH DECREASING ANODE VOLTAGE. IN GENERAL, THE ANODE VOLTAGE SHOULD NOT BE LESS THAN 14,000 VOLTS.

^C VISUAL EXTINCTION OF FOCUSED RASTER.

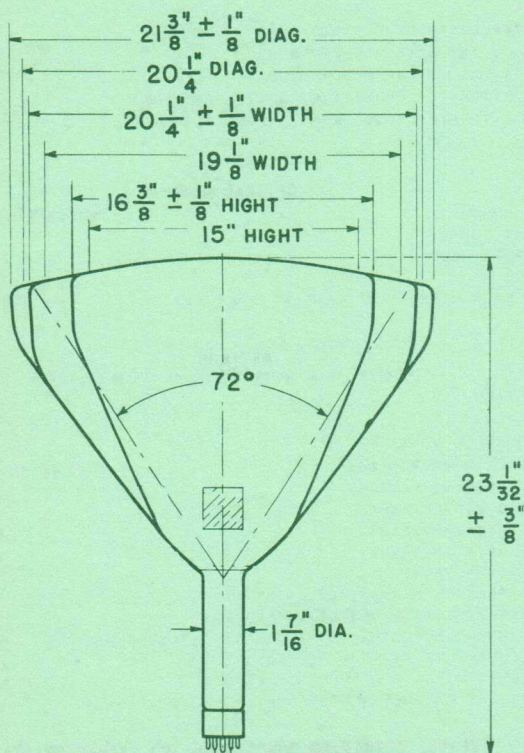
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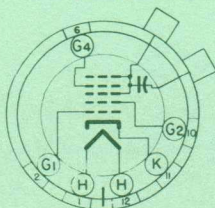
MECHANICAL DATA

OVERALL LENGTH	23 $\frac{1}{32}$ $\pm$ $\frac{3}{8}$	INCHES
GREATEST DIMENSIONS OF BULB:		
DIAGONAL	21 $\frac{3}{8}$ $\pm$ $\frac{1}{8}$	INCHES
WIDTH	20 $\frac{1}{4}$ $\pm$ $\frac{1}{8}$	INCHES
HEIGHT	16 $\frac{3}{8}$ $\pm$ $\frac{1}{8}$	INCHES
MIN. USEFUL SCREEN DIMENSIONS:		
DIAGONAL	20 $\frac{1}{4}$	INCHES
WIDTH	19 $\frac{1}{8}$	INCHES
HEIGHT	15	INCHES
BULB CONTACT	RECESSED SMALL CAVITY CAP	J4-21
BASE	SMALL SHELL DUODECAL 6-PIN	B6-63
BASING		12L
BULB CONTACT ALIGNMENT		
J4-21 CONTACT ALIGNS WITH PIN POSITION #6 $\pm$ 30 DEGREES		



PIN 1 - HEATER
 PIN 2 - GRID #1
 PIN 6 - GRID #4
 PIN 10 - GRID #2
 PIN 14 - CATHODE

PIN CONNECTIONS



PIN 12 - HEATER
 ANODE CAP:
 GRID NO. 3
 GRID NO. 5

BOTTOM VIEW