

TUNG-SOL

CATHODE RAY

THE 27EP4 IS A DIRECT-VIEW PICTURE TUBE DESIGNED FOR USE IN TELEVISION APPLICATIONS. ITS FEATURES INCLUDE:

SPHERICAL FACEPLATE	ALUMINIZED SCREEN
GREY FILTER FACEPLATE	UNIPOTENTIAL CATHODE
MAGNETIC FOCUS & DEFLECTION	24" X 18 1/2" RASTER SIZE
RECTANGULAR GLASS CONSTRUCTION	EXTERNAL SINGLE FIELD ION TRAP

ELECTRICAL DATA

FOCUSING METHOD		MAGNETIC
DEFLECTING METHOD		MAGNETIC
DEFLECTION ANGLE (APPROX.):		
HORIZONTAL	85	DEGREES
DIAGONAL	90	DEGREES
DIRECT INTERELECTRODE CAPACITANCES (APPROX.):		
CATHODE TO ALL OTHER ELECTRODES	5	μf
GRID #1 TO ALL OTHER ELECTRODES	6	μf

OPTICAL DATA

PHOSPHOR NUMBER	SULFIDE TYPE	NO. 4
FLUORESCENT COLOR		WHITE
PHOSPHORESCENT COLOR		WHITE
PERSISTENCE		SHORT
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.):	70	PERCENT

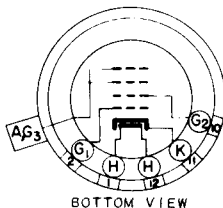
MECHANICAL DATA

OVERALL LENGTH	$23 \frac{1}{16} \pm \frac{1}{8}$	INCHES
GREATEST DIMENSIONS OF BULB:		
DIAGONAL	$26 \frac{13}{16} \pm \frac{3}{16}$	INCHES
WIDTH	$25 \frac{9}{32} \pm \frac{3}{16}$	INCHES
HEIGHT	$20 \frac{7}{32} \pm \frac{3}{16}$	INCHES
MINIMUM USEFUL SCREEN DIMENSIONS:		
DIAGONAL	$25 \frac{3}{4}$	INCHES
WIDTH	24	INCHES
HEIGHT	$18 \frac{1}{2}$	INCHES
BULB CONTACT	RECESSED SMALL CAVITY CAP	J1-21
BASE	SMALL SHELL DUODECAL 5 PIN	B5-S7
BASING		12D
BULB CONTACT ALIGNMENT		
J1-21 CONTACT ALIGNS WITH PIN POSITION #6 $\pm$ 30 DEGREES		

PIN CONNECTIONS

PIN 1 - HEATER
 PIN 2 - GRID NO. 1
 PIN 10 - GRID NO. 2
 PIN 11 - CATHODE

PIN 12 - HEATER
 ANODE CAP:
 GRID NO. 3



BOTTOM VIEW

CONTINUED ON FOLLOWING PAGE

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

RATINGS^A

DESIGN CENTER VALUES

HEATER VOLTAGE	6.3	VOLTS
HEATER CURRENT	0.6	AMP.
MAXIMUM DC ANODE, GRID #3 VOLTAGE ^B	20 000	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 ^C		
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

^A THESE MAXIMUM RATINGS CONTAIN A 10% SAFETY FACTOR IN ACCORDANCE WITH THE STANDARD DESIGN CENTER SYSTEM IN RATING CATHODE-RAY TUBES. CONSEQUENTLY, THE TUBE WILL WITHSTAND VARIATIONS IN SUPPLY LINE VOLTAGE WHICH DO NOT CAUSE THE MAXIMUM RATINGS TO BE EXCEEDED BY MORE THAN 10%.

^B IF THE TUBE IS OPERATED AT VOLTAGE IN EXCESS OF 16,000 VOLTS, X-RAY RADIATION SHIELDING MAY BE NECESSARY TO PREVENT DANGER FROM PROLONGED EXPOSURE AT CLOSE RANGE.

^C CATHODE SHOULD BE RETURNED TO ONE SIDE OR TO THE MID-TAP OF THE HEATER TRANSFORMER WINDING.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC ANODE, GRID #3 VOLTAGE	12 000	VOLTS
DC GRID #2 VOLTAGE	300	VOLTS
DC GRID #1 VOLTAGE ^D	-33 TO -77	VOLTS
DC FOCUSING COIL CURRENT (APPROX.) ^E	87 $\pm$ 20%	MA.
DC ION TRAP CURRENT STANDARD COIL #111 (APPROX.)	75 $\pm$ 50%	MA.
ION TRAP MAGNET (RATED STRENGTH) APPROX.	38	GAUSSSES

^D VISUAL EXTINCTION OF UNDEFLECTED FOCUSED SPOT.

^E FOR STANDARD FOCUS COIL #109, OR EQUIVALENT, WITH THE COMBINED GRID #1 BIAS VOLTAGE AND VIDEO-SIGNAL VOLTAGE ADJUSTED TO PRODUCE A HIGHLIGHT BRIGHTNESS OF 20 FOOT LAMBERTS ON A 24" BY 18 1/2" PICTURE SIZE. DISTANCE FROM REFERENCE LINE TO CENTER OF AIR GAP ON FOCUS COIL SHALL BE 3.0 INCHES.

CIRCUIT VALUES

MAXIMUM GRID #1 CIRCUIT RESISTANCE	1.5	MEGOHMS
------------------------------------	-----	---------

TUNG-SOL

