

TUNG-SOL

CATHODE RAY

THE 14HP4 IS A DIRECT-VIEW PICTURE TUBE DESIGNED FOR USE IN TELEVISION RECEIVERS. ITS FEATURES INCLUDE:

UNIPOTENTIAL CATHODE
EXTERNAL CONDUCTIVE COATING
RECTANGULAR GLASS CONSTRUCTION
LOW VOLTAGE ELECTROSTATIC FOCUS

MAGNETIC DEFLECTION
GREY FILTER FACEPLATE
11 3/8" X 8 1/2" RASTER SIZE
EXTERNAL SINGLE FIELD ION TRAP MAGNET

ELECTRICAL DATA

FOCUSING METHOD	LOW VOLTAGE ELECTROSTATIC	
DEFLECTING METHOD	MAGNETIC	
DEFLECTION ANGLE (APPROX.):		
HORIZONTAL	65	DEGREES
DIAGONAL	70	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	2 000	μf
MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	750	μf

OPTICAL DATA

PHOSPHOR NUMBER	SULFIDE TYPE	P-4
FLUORESCENT COLOR		WHITE
PHOSPHORESCENT COLOR		WHITE
PERSISTENCE		MEDIUM
FACEPLATE TRANSMISSION AT CENTER (APPROX.):	74	PERCENT

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

HEATER VOLTAGE	6.3	VOLTS
HEATER CURRENT	0.6	AMP.
MAXIMUM DC ANODE VOLTAGE	14 000	VOLTS
MAXIMUM DC GRID #4 VOLTAGE	-500 TO + 500	VOLTS
MAXIMUM DC GRID #2 VOLTAGE	450	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:		
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

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC ANODE VOLTAGE	12 000	VOLTS
DC GRID #4 VOLTAGE ^A	-48 TO + 264	VOLTS
DC GRID #2 VOLTAGE	300	VOLTS
DC GRID #1 VOLTAGE ^B	-28 TO -72	VOLTS
DC ION TRAP MAGNET STANDARD COIL #111 (APPROX.)	70	MA.

CIRCUIT VALUES

MAXIMUM GRID #1 CIRCUIT RESISTANCE	1.5	MEG OHMS
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^A WITH THE COMBINED GRID #1 BIAS VOLTAGE AND VIDEO-SIGNAL VOLTAGE ADJUSTED TO GIVE AN ANODE #2 CURRENT OF 100 MICROMPERES ON A 11 1/4" BY 8 3/8" PICTURE SIZE.

^B VISUAL EXTINCTION OF FOCUSED RASTER.

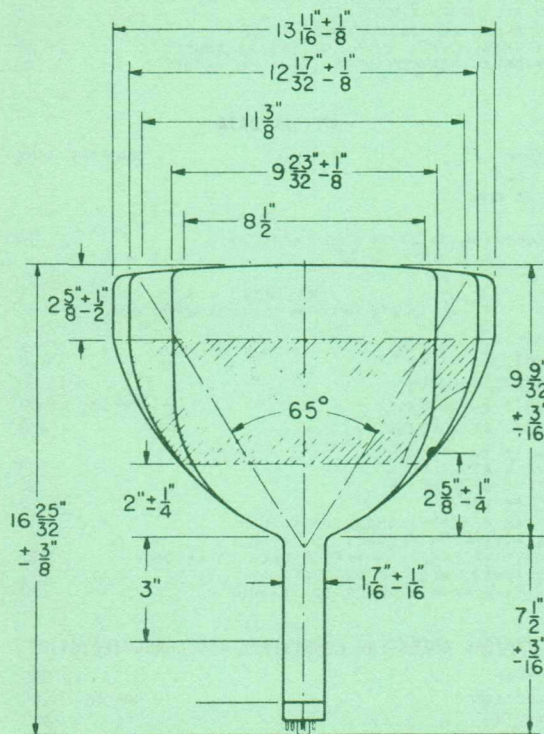
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MECHANICAL DATA

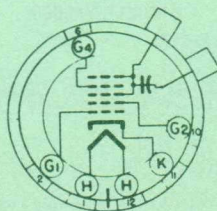
OVERALL LENGTH	16 $\frac{25}{32} \pm \frac{3}{8}$	INCHES
GREATEST DIMENSIONS OF BULB:		
DIAGONAL	13 $\frac{11}{16}$	INCHES
WIDTH	12 $\frac{17}{32} \pm \frac{1}{8}$	INCHES
HEIGHT	9 $\frac{23}{32} \pm \frac{1}{8}$	INCHES
MINIMUM USEFUL SCREEN DIMENSIONS:		
WIDTH	11 $\frac{3}{8}$	INCHES
HEIGHT	8 $\frac{1}{2}$	INCHES
BULB CONTACT	RECESSED SMALL CAVITY CAP	J1-21
BASE	SMALL SHELL DUODECAL 6 PIN	86-63
BASING		12L
BULB CONTACT ALIGNMENT		
J1-21 CONTACT ALIGNS WITH PIN POSITION #6 ± 30 DEGREES		



PIN CONNECTIONS

PIN 1 - HEATER
 PIN 2 - GRID #1
 PIN 6 - GRID #4
 PIN 10 - GRID #2
 PIN 11 - CATHODE

PIN 12 - HEATER
 ANODE CAP



BOTTOM VIEW