# --- TUNS-SOL --

## CATHODE RAY

THE 24XP4 IS A DIRECT-VIEW PICTURE TUBE DESIGNED FOR USE IN TELEVISION APPLICATIONS. ITS FEATURES INCLUDE:

UNIPOTENTIAL CATHODE
RECTANGULAR GLASS
16 3/4" X 21 1/4" RASTER SIZE

GREY FILTER FACEPLATE EXTERNAL SINGLE FIELD ION TRAP MAGNETIC FOCUS & DEFLECTION

# ELECTRICAL DATA

FOCUSING METHOD		MAGNETIC
DEFLECTING METHOD		MAGNETIC
DEFLECTION ANGLE (APPROX.):		
HORIZONTAL	85	DEGREES
VERTICAL	68	DEGREES
DIAGONAL	90	DEGREES
DIRECT INTERELECTRODE CAPACITANCES (APPROX.):		
CATHODE TO ALL OTHER ELECTRODES	5	μμf
GRID #1 TO ALL OTHER ELECTRODES	6	μμf

## OPTICAL DATA

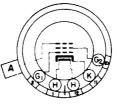
PHOSPHOR NUMBER		NO. 4
FLUORESCENT COLOR		WHITE
PHOSPHORESCENT COLOR		WHITE
PERSISTENCE		MEDIUM
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.)	68	PERCENT

### MECHANICAL DATA

MEDITAL DATA		
OVERALL LENGTH	21 1/8 ± 3/8	INCHES
GREATEST DIMENSIONS OF BULB:		
DIAGONAL	24 ± 3/16	INCHES
WIDTH	22 11/16 ± 3/16	INCHES
HEIGHT	18 7/16 ± 3/16	INCHES
MINIMUM USEFUL SCREEN DIMENSION	NS:	
WIDTH	21 1/4	INCHES
HEIGHT	16 3/4	INCHES
BULB CONTACT	RECESSED SMALL CAVITY CAP	J1-21
BASE	SMALL SHELL DUODECAL 5 PIN	85-57
BASING		12D

### PIN CONNECTIONS

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



PIN 11 - CATHODE PIN 12 - HEATER ANODE CAP

BOTTOM VIEW

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### RATINGS DESIGN CENTER VALUES

HEATER VOLTAGE	6.3	VOLTS
HEATER CURRENT	0.6	AMP.
MAXIMUM DC GRID #2 VOLTAGE	500	VOLTS
MAXIMUM GRID #1 VOLTAGE:		
DC NEGATIVE-BIAS VALUE	125	VONTS
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

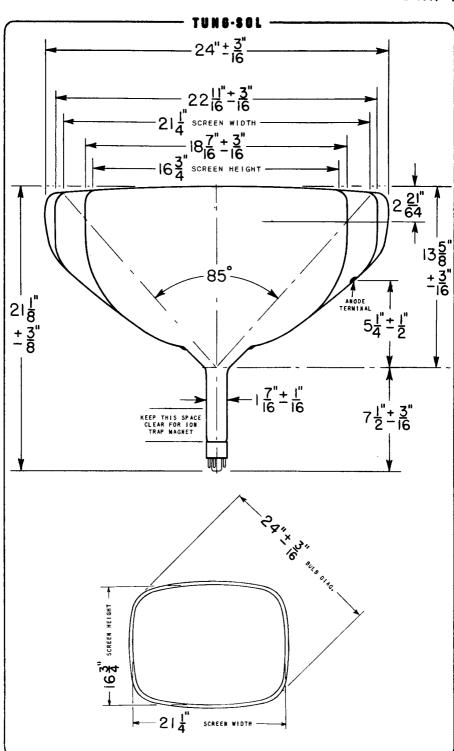
DC ANODE VOLTAGE	18 000	VOLTS
DC GRID #2 VOLTAGE	300	VOLTS
DC GRID #1 VOLTAGE <sup>A</sup>	-28 to -72	VOLTS
DC FOCUSING COIL CURRENT (APPROX.) B	125 + 20%	MA.
DC ION TRAP CURRENT STANDARD COIL #117 (APPROX.)	35 + 40%	MA.

AVISUAL EXTINCTION OF UNDEFLECTED FOCUSED SPOT.

## CIRCUIT VALUES

MAXIMUM GRID #1 CIRCUIT RESISTANCE 1.5 MEGOHMS

BFOR STANDARD FOCUS COIL #109, OR EQUIVALENT, WITH THE COMBINED GRIO #1 BIAS VOLTAGE AND VIDEO
SIGNAL VOLTAGE ADJUSTED TO PRODUCE A HIGHLIGHT BRIGHTNESS OF 20 FOOT LAMBERTS ON A 21 1/4" BY
16 3/4" PICTURE SIZE. DISTANCE FROM REFERENCE LINE TO CENTER OF AIR GAP ON FOCUS COIL SHALL
BE 3.0 INCHES.



MTES IN C. S. A.