

TUNG-SOL

CATHODE RAY

THE 21MP4 IS A DIRECT-VIEW PICTURE TUBE DESIGNED FOR USE IN TELEVISION APPLICATIONS. ITS FEATURES INCLUDE:

MAGNETIC DEFLECTION	UNIPOENTIAL CATHODE
RECTANGULAR METAL CONSTRUCTION	FROSTED FILTERGLASS FACEPLATE
LOW VOLTAGE ELECTROSTATIC FOCUS	EXTERNAL SINGLE FIELD ION TRAP
18 3/8" X 14" RASTER SIZE	

ELECTRICAL DATA

		ELECTROSTATIC	MAGNETIC
FOCUSING METHOD			
DEFLECTING METHOD			
DEFLECTION ANGLE (APPROX.):			
HORIZONTAL	66	DEGREES	
VERTICAL	50	DEGREES	
DIAGONAL	70	DEGREES	
DIRECT INTERELECTRODE CAPACITANCES (APPROX.):			
CATHODE TO ALL OTHER ELECTRODES	5	$\mu\mu\text{f}$	
GRID #1 TO ALL OTHER ELECTRODES	6	$\mu\mu\text{f}$	

OPTICAL DATA

	SULFIDE TYPE	NO. 4
PHOSPHOR NUMBER		
FLUORESCENT COLOR		WHITE
PHOSPHORESCENT COLOR		WHITE
PERSISTENCE		SHORT
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.)	66	PERCENT

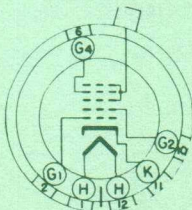
MECHANICAL DATA

OVERALL LENGTH	22 5/8	INCHES
GREATEST DIMENSIONS OF BULB:		
DIAGONAL	20 3/4 $\pm$ 1/4	INCHES
WIDTH	19 23/32 $\pm$ 1/8	INCHES
HEIGHT	15 5/16 $\pm$ 1/8	INCHES
MINIMUM USEFUL SCREEN DIMENSIONS:		
DIAGONAL	19 3/8	INCHES
WIDTH	18 3/8	INCHES
HEIGHT	14	INCHES
BULB CONTACT	METAL SHELL LIP	
BASE	SMALL SHELL DUODECAL 6 PIN	B6-63
BASING		12M
BASE ALIGNMENT		
PIN #6 ALIGNS WITH HORIZONTAL PICTURE AXIS $\pm$ 10 DEGREES		

PIN CONNECTIONS

PIN 1 - HEATER
 PIN 2 - GRID NO. 1
 PIN 6 - GRID NO. 4
 PIN 10 - GRID NO. 2
 PIN 11 - CATHODE

PIN 12 - HEATER
 METAL SHELL LIP:
 GRID NO. 3,
 GRID NO. 5,
 COLLECTOR



BOTTOM VIEW

CONTINUED ON FOLLOWING PAGE

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RATINGS

DESIGN CENTER VALUES

HEATER VOLTAGE	6.3	VOLTS
HEATER CURRENT	0.6	AMP.
MAXIMUM DC GRID #3, GRID #5, COLLECTOR VOLTAGE	16 000	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 GRID #4 VOLTAGE	-500 ^A TO +1000	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

^A THIS VALUE HAS BEEN SPECIFIED TO TAKE CARE OF THE CONDITION WHERE AN AC VOLTAGE IS PROVIDED FOR DYNAMIC FOCUSING.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC GRID #3, GRID #5, COLLECTOR VOLTAGE	14 000	VOLTS
DC GRID #4 VOLTAGE (FOCUSING ELECTRODE) ^B	-55 TO +300	VOLTS
DC GRID #2 VOLTAGE	300	VOLTS
DC GRID #1 VOLTAGE ^C	-33 TO -77	VOLTS
ION TRAP MAGNET (RATED STRENGTH)	45	GAUSSSES

^B WITH GRID #3, GRID #5, COLLECTOR CURRENT OF 100 UAMP.

^C VISUAL EXTINCTION OF UNDEFLECTED FOCUSED SPOT.

CIRCUIT VALUES

MAXIMUM GRID #1 CIRCUIT RESISTANCE	1.5	MEGOHMS
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