TUMB-SOL -

CATHODE RAY

THE 20CP4, 20CP4A, 20CP4B, 20CP4C AND 20CP4D ARE DIRECT-VIEW PICTURE TUBES DESIGNED FOR USE IN TELEVISION APPLICATIONS. THEY ARE IDENTICAL WITH THE FOLLOWING EXCEPTIONS.

20CP4B & 20CP4D - External conductive coating 20CP4B & 20CP4D - Aluminized

20CPAC - Faceplate has been treated with a specular reflection reducing surface.

THEIR COMMON FEATURES INCLUDE:

GREY FILTER FACEPLATE
MAGNETIC FOCUS & DEFLECTION
RECTANGULAR GLASS CONSTRUCTION

UNIPOTENTIAL CATHODE

17" X 12 3/4" RASTER SIZE

EXTERNAL SINGLE FIELD ION TRAP

ELECTRICAL DATA

FOCUSING METHOD		MAGNETIC
DEFLECTING METHOD		MAGNETIC
DEFLECTION ANGLE (APPROX.):		
HORIZONTAL	66	DEGREES
DIAGONAL	70	DEGREES
DIRECT INTERELECTRODE CAPACITANCES (APPROX.):		
CATHODE TO ALL OTHER ELECTRODES	5	μμf
GRID #1 TO ALL OTHER ELECTRODES	6	μμf
MAXIMUM EXTERNAL CONDUCTIVE COATING TO ANODE 20CP4A	750	μμf
MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE 20CP4D	500	μμf

OPTICAL DATA

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

RATINGS DESIGN CENTER VALUES

HEATER: VOLTAGE	6.3	VOLTS
HEATER CURRENT	0.6	AMP.
MAXIMUM DC ANODE VOLTAGE	18 000	VOLTS
MAXIMUM DC GRID #2 VOLTAGE	410	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	150	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE	150	VOLTS
MAXIMUM GRID #1 CIRCUIT RESISTANCE	1.5	MEGOHMS

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

DC ANODE VOLTAGE	12 000	VOLTS
DC GRID #2 VOLTAGE	300	VOLTS
DC GRID #1 VOLTAGE^A	-33 T o -77	VOLTS
DC FOCUSING COIL CURRENT ^B (APPROX.)	95 ± 20%	MA.
DC ION TRAP CURRENT STANDARD COIL #111 (APPROX.)	75 ± 50%	MA.

Avisual extinction of undeflected focused spot.

CONTINUED ON FOLLOWING PAGE

B-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 30 FOOT LAMBERTS ON A 12 3/4*BY 17* PICTURE SIZE. DISTANCE FROM REFERENCE LINE TO CENTER OF AIR GAP ON FOCUS COIL SMALL BE 3,0 INCHES.

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

MECHANICAL DATA

OVERALL LENGTH 21 7/16 ± 3/8 INCHES

GREATEST DIMENSIONS OF BULB:

DIAGONAL 20 3/32 ± 1/8 INCHES

WIDTH 18 11/16 ± 1/8 INCHES

HEIGHT 14 15/16 ± 1/8 INCHES

MINIMUM USEFUL SCREEN DIMENSIONS:

 DIAGONAL
 18 3/4
 INCHES

 WIDTH
 17
 INCHES

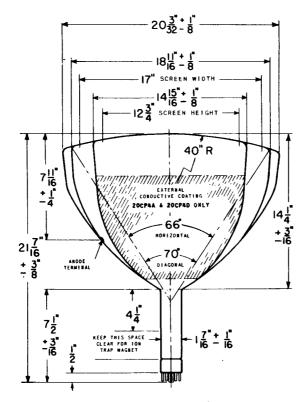
 HEIGHT
 12 3/4
 INCHES

 BULB CONTACT
 RECESSED SMALL CAVITY CAP
 J1-21

BASE SMALL SHELL DUODECAL 5 PIN BASING 20CP4A, 20CP4D - 12N OTHERS

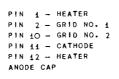
BULB CONTACT ALIGNMENT

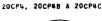
J4-24 CONTACT ALIGNS WITH PIN POSITION #6. ± 30 DEGREES





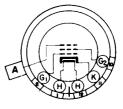
PIN CONNECTIONS





B5-57

12D



BOTTOM VIEW

BOTTOM VIEW