



7TP4

7TP4 MONITOR KINESCOPE

METAL-BACKED SCREEN

ELECTROSTATIC FOCUS

MAGNETIC DEFLECTION

DATA

General:

Heater, for Unipotential Cathode:

Voltage	6.3	ac or dc volts
Current	0.6	amp

Direct Interelectrode Capacitances (Approx.):

Grid No.1 to All Other Electrodes	6	$\mu\mu\text{f}$
Cathode to All Other Electrodes	5	$\mu\mu\text{f}$

Faceplate	Clear Glass
Phosphor, Metal-Backed ^o	P4—Sulfide Type
Fluorescence and Phosphorescence	White
Persistence of Phosphorescence	Short

Focusing Method	Electrostatic
Deflection Method	Magnetic

Deflection Angle (Approx.) 50°

Overall Length 13-1/8" ± 3/8"

Greatest Diameter of Bulb 7-3/16" ± 1/8"

Minimum Useful Screen Diameter 6"

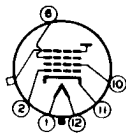
Picture Size (Within minimum-useful-screen area) 5-3/8" x 4"

Cap Recessed Small Cavity (JETEC No. J1-21)

Base Small-Shell Duodecal 6-Pin (JETEC No. B6-63)

BOTTOM VIEW

- Pin 1 - Heater
- Pin 2 - Grid No.1
- Pin 6 - Grid No.3
- Pin 10 - Grid No.2
- Pin 11 - Cathode



- Pin 12 - Heater
- Cap - Grid No.4, Collector (Ultror)

Maximum Ratings, Design-Center Values:

ULTOR ^o VOLTAGE	12000 max. volts
GRID-No.3 VOLTAGE	2000 max. volts
GRID-No.2 VOLTAGE	410 max. volts
GRID-No.1 VOLTAGE:	
Negative bias value	125 max. volts
Positive bias value	0 max. volts
Positive peak value	2 max. volts

^o For curves, see front of this Section.

• In the 7TP4, grid No.4 which has the ultor function, and collector are connected together within the tube and are conveniently referred to collectively as "ultor". The "ultor" in a cathode-ray tube is the electrode, or the electrode in combination with one or more additional electrodes connected within the tube to it, to which is applied the highest dc voltage for accelerating the electrons in the beam prior to its deflection.

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PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode:		
During equipment warm-up period	not exceeding 15 seconds	410 max. volts
After equipment warm-up period. . .		180 max. volts
Heater positive with respect to cathode.		180 max. volts

Equipment Design Ranges:

For any ultor voltage (E_u) between 10000 and 12000 volts
and grid-No.2 voltage (E_{c2}) between 150 and 410 volts*

Grid-No.3 Voltage for Focus with Ultor Current of 100 μ amp. . .	11.6% to 15.8% of E_u	volts
Grid-No.1 Voltage for Visual Extinction of Undelected Focused Spot.	11% to 25.7% of E_{c2}	volts
Grid-No.3 Current**.	See Curves	
Grid-No.2 Current.	-15 to +15	μ amp
Field Strength of Adjustable Centering Magnet.	0 to 8	gausses

Examples of Use of Design Ranges:

*For ultor voltage of 10000 volts
and grid-No.2 voltage of 200 volts*

Grid-No.3 Voltage for Focus with Ultor Current of 100 μ amp. . .	1160 to 1580	volts
Grid-No.1 Voltage for Visual Extinction of Undelected Focused Spot.	-22 to -52	volts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance.	1.5 max.	megohms
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* Brilliance and definition decrease with decreasing ultor voltage. In general, the ultor voltage should not be less than 10000 volts.

** Grid-No.3 current increases as the ultor voltage is decreased.

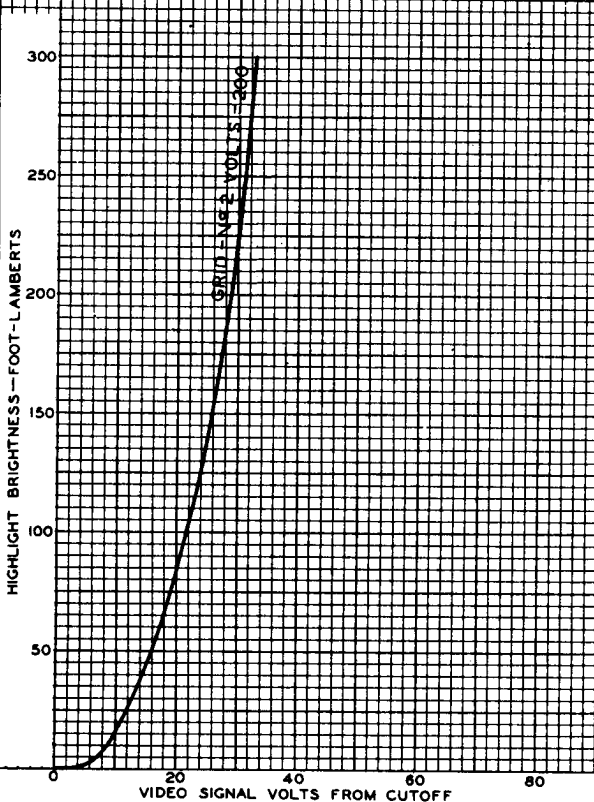
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AVERAGE GRID-DRIVE CHARACTERISTICS

$E_f = 6.3$ VOLTS
ULTOR (GRID-N^o 4 AND COLLECTOR) VOLTS = 10000
GRID-N^o 3 VOLTS ADJUSTED TO GIVE FOCUS AT AVERAGE RASTER BRIGHTNESS
GRID N^o 1 BIASED TO CUTOFF OF UNDEFLECTED FOCUSED SPOT
RASTER SIZE = $5 \frac{3}{8}$ " X 4"





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AVERAGE GRID-DRIVE CHARACTERISTICS

