12DP7-B

OSCILLOGRAPH TUBE

MAGNETIC FOCUS MAGNETIC DEFLECTION

Supersedes Type 12DP7-A

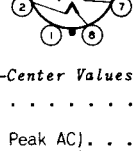
DATA

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	9	μμf
Cathode to All Other Electrodes	6	μμf
Faceplate (With about 66% light transmission)		Filterglass
Phosphor (For Curves, see front of this Section)		P7
Fluorescence		Blue
Persistence		Short
Phosphorescence		Greenish-Yellow
Persistence		Long
Focusing Method		Magnetic
Deflection Method		Magnetic
Deflection Angle (Approx.)		50°
Overall Length		19-5/8" ± 1/2"
Greatest Diameter		12" ± 3/16"
Minimum Useful Screen Diameter		10"
Weight (Approx.)		8 lbs
Mounting Position		Any
Cap		Medium (JETEC No.C1-5)
Bulb		J96K
Base		Long Medium-Shell Octal 8-Pin (JETEC No.B8-65)

BOTTOM VIEW

Pin 1 – No Connection
Pin 2 – Heater
Pin 3 – Grid No.2
Pin 4 – No Connection
Pin 5 – Grid No.1



Pin 6 – No Connection
Pin 7 – Cathode
Pin 8 – Heater
Cap – Ultor (Grid No.3, Collector)

Maximum Ratings, *Design-Center Values*:

ULTOR● VOLTAGE	10000 max.	volts
GRID-No.2 VOLTAGE:		
Positive value (DC or Peak AC)	700 max.	volts
Negative value (DC or Peak AC)	180 max.	volts
GRID-No.1 VOLTAGE:		
Negative bias value	180 max.	volts
Positive bias value▲	0 max.	volts
Positive peak value	2 max.	volts

● In the 12DP7-B, grid No.3 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.

▲ At or near this rating, the effective resistance of the ultor supply should be adequate to limit the ultor input power to 6 watts.

12DP7-B

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PEAK GRID-No.1 DRIVE FROM CUTOFF	65 max.	volts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode .	125 max.	volts
Heater positive with respect to cathode .	125 max.	volts

Equipment Design Ranges:

For any ultor voltage (E_u) between 4000 and 10000 volts and grid-No.2 voltage (E_{c_2}) between 150 and 700 volts*

Grid-No.1 Voltage for Visual Extinction of Undeflected Focused Spot.	10% to 28% of E_{c2}	volts
Grid-No.2 Current.	−15 to +15	μamp
Focusing-Coil Current (DC)^{oo}	$\left[\sqrt{\frac{E_u}{4000}} \times 88.5\right] \pm 15\%$	ma
Spot Position	##	

Examples of Use of Design Ranges:

For ultor voltage of. .	*4000*	*7000*	*volts*
and grid-No.2 voltage of	*250*	*250*	*volts*
Grid-No.1 Voltage for Visual Extinction of Undeflected Focused Spot.	−25 to −70	−25 to −70	volts
Focusing-Coil Current (DC) .	88.5 ± 15%	117 ± 15%	ma

Maximum Circuit Values:

Grid-No.1-Circuit Resistance	1.5 max.	megohms

* Brilliance and definition decrease with decreasing ultor voltage. In general, the ultor voltage should not be less than 4000 volts.

oo For specimen focusing coil similar to JETEC Focusing Coil No.106 positioned with air gap toward faceplate and center line of air gap 4-1/8" from Reference Line (see *Outline Drawing*) and ultor current of 200 microamperes.

The center of the undeflected, unfocused spot will fall within a circle having a 20-mm radius concentric with the center of the tube face.

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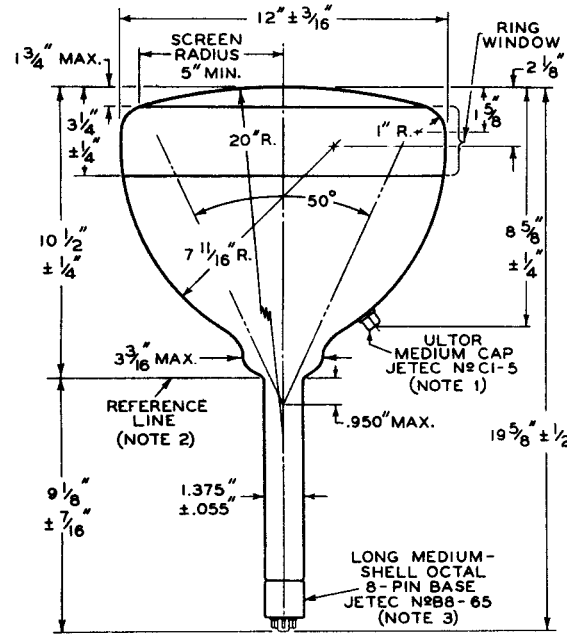

NOTE 1: THE PLANE THROUGH THE TUBE AXIS AND PIN No.5 MAY VARY FROM THE PLANE THROUGH THE TUBE AXIS AND ULTOR TERMINAL BY AN ANGULAR TOLERANCE (MEASURED ABOUT THE TUBE AXIS) OF ± 10°. ULTOR TERMINAL IS ON SAME SIDE OF TUBE AS PIN No.5.

NOTE 2: REFERENCE LINE IS DETERMINED BY POSITION WHERE GAUGE 1.430" + .003" -.000" I.D. AND 2" LONG WILL REST ON BULB CONE.

NOTE 3: ℄ OF BULB WILL NOT DEVIATE MORE THAN 2° IN ANY DIRECTION FROM THE PERPENDICULAR ERECTED AT THE CENTER OF THE BOTTOM OF THE BASE.

92CM-6375R5

12DP7-B

RCA

12DP7-B

AVERAGE GRID-DRIVE CHARACTERISTICS