



12DP7-A

12DP7-A OSCILLOGRAPH TUBE

MAGNETIC FOCUS

MAGNETIC DEFLECTION

DATA

General:

Heater, for Unipotential Cathode:

Voltage. 6.3 ac or dc volts

Current. $0.6 \pm 10\%$ amp

Direct Interelectrode Capacitances (Approx.):

Grid No.1 to all other electrodes. 9 μf Cathode to all other electrodes. 6 μf

Faceplate, Spherical Filterglass

Light transmission (Approx.) 76%

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 $19\text{--}5/8" \pm 1/2"$ Greatest Diameter of Bulb. $12" \pm 3/16"$

Minimum Useful Screen Diameter 10"

Weight (Approx.) 8 lbs

Mounting Position. Any

Cap. Medium (JETEC No.C1-5)

Bulb J96

Base Long Medium-Shell Octal 8-Pin (JETEC No.B8-65),

or Long Medium-Shell Octal 5-Pin (JETEC No.B5-80)

Basing Designation for BOTTOM VIEW 5AN

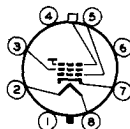
Pin 1 - No Connec-
tion

Pin 2 - Heater

Pin 3 - Grid No.2

Pin 4 - No Connec-
tion

Pin 5 - Grid No.1

Pin 6 - No Connec-
tion

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

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

← Indicates a change.



12DP7-A

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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_{c3}) between 4000* and 10000 volts
and grid-No.2 voltage (E_{c2}) between 150 and 750 volts

Grid-No.1 Voltage for Visual
Extinction of Undelected

Focused Spot -10% to -28% of E_{c2} volts

Grid-No.2 Current. -15 to +15 μ amp

Focusing-Coil Current (DC)⁰⁰ . $\left[\sqrt{\frac{E_{c3}}{4000}} \times 88.5 \right] \pm 15\%$ 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 Undelected

Focused Spot -25 to -70 -25 to -70 volts

Focusing-Coil Current (DC) . 75 to 102 99 to 135 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.

⁰⁰ 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 Dimensional Outline) and ultor current of 200 microamperes.

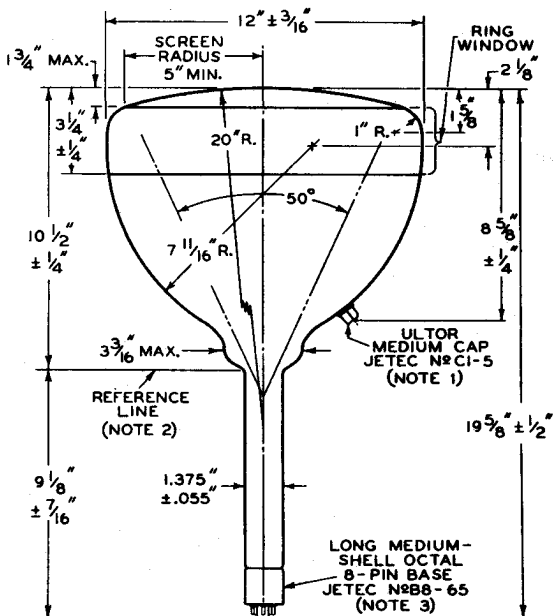
The center of the undeflected, unfocused spot will fall within a circle having a 20-mm radius concentric with the center of the tube face.



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92CM-6375R6

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 $\pm 10^\circ$. 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.

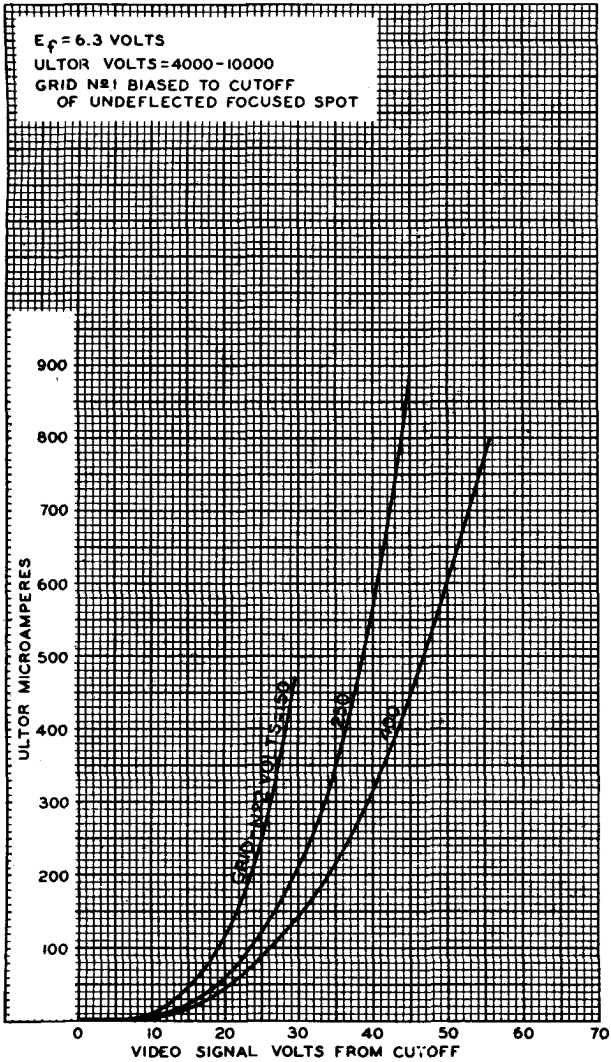
NOTE 3: $\angle$ OF BULB WILL NOT DEVIATE MORE THAN 2° IN ANY DIRECTION FROM THE PERPENDICULAR ERECTED AT THE CENTER OF THE BOTTOM OF THE BASE.

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AVERAGE GRID-DRIVE CHARACTERISTICS



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TUBE DIVISION
 RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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