

5AHP7
5AHP7-A5AHP7, 5AHP7-A
OSCILLOGRAPH TUBE

ELECTROSTATIC 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. 6 μf Cathode to all other electrodes. 5 μf

Faceplate, Spherical Clear Glass

Phosphor (For Curves,
see front of this
section).Type 5AHP7
P7Type 5AHP7-A
P7—Aluminized

Fluorescence Blue

Phosphorescence. Greenish-Yellow

Persistence. Long

Focusing Method. Electrostatic

Deflection Method. Magnetic

Deflection Angle (Approx.) 53° Overall Length $11\text{--}1\frac{1}{8}" \pm 1\frac{1}{4}"$ Greatest Diameter of Bulb. $4\text{--}15\frac{15}{16}" \pm 3\frac{3}{32}"$ Minimum Useful Screen Diameter $4\text{--}1\frac{1}{4}"$

Weight (Approx.) 1 lb 6 oz

Mounting Position. Any

Cap. Recessed Small Ball (JETEC No.J1-22)

Bulb J39-1/2

Base Medium-Shell Octal 8-Pin (JETEC No.B8-11),
or Long Medium-Shell Octal 8-Pin (JETEC No.B8-65)

Basing Designation for BOTTOM VIEW 8EF

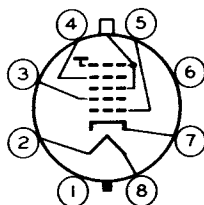
Pin 1 - No Connec-
tion

Pin 2 - Heater

Pin 3 - Grid No.2

Pin 4 - Grid No.4

Pin 5 - Grid No.1

Pin 6 - No Connec-
tion

Pin 7 - Cathode

Pin 8 - Heater

Cap - Ultor

(Grid No.3,

Grid No.5,

Collector)

Maximum Ratings, Design-Center Values:

ULTOR VOLTAGE. 10000 max. volts

GRID-No.4 VOLTAGE:

Positive value 1000 max. volts

Negative value 500 max. volts

GRID-No.2 VOLTAGE. 700 max. volts

GRID-No.1 VOLTAGE:

Negative bias value. 180 max. volts

Positive bias value* 0 max. volts

Positive peak value. 0 max. volts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode. 180 max. volts

Heater positive with respect to cathode. 180 max. volts

*: See next page.



5AHP7, 5AHP7-A

OSCILLOGRAPH TUBE

Equipment Design Ranges:

With any ultor voltage (E_{C5}) between 5000* and 10000 volts
and grid-No.2 voltage (E_{C2}) between 300 and 700 volts

Grid-No.4 Voltage for Focus with Ultor Current of 100 μ amp.	0% to 3.6% of E_{C5}	volts
Grid-No.1 Voltage for Visual Extinction of Undelected Focused Spot	-11% to -25.7% of E_{C2}	volts
Grid-No.4 Current.	-25 to +25	μ amp
Grid-No.2 Current.	-15 to +15	μ amp
Spot Position.	##	

Examples of Use of Design Ranges:

With ultor voltage of	7000	volts
and grid-No.2 voltage of	300	volts
Grid-No.4 Voltage for Focus with Ultor Current of 100 μ amp.	0 to 250	volts
Grid-No.1 Voltage for Visual Extinction of Undelected Focused Spot	-33 to -77	volts

Maximum Circuit Values:

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

SPECIAL PERFORMANCE DATA

Line Width:

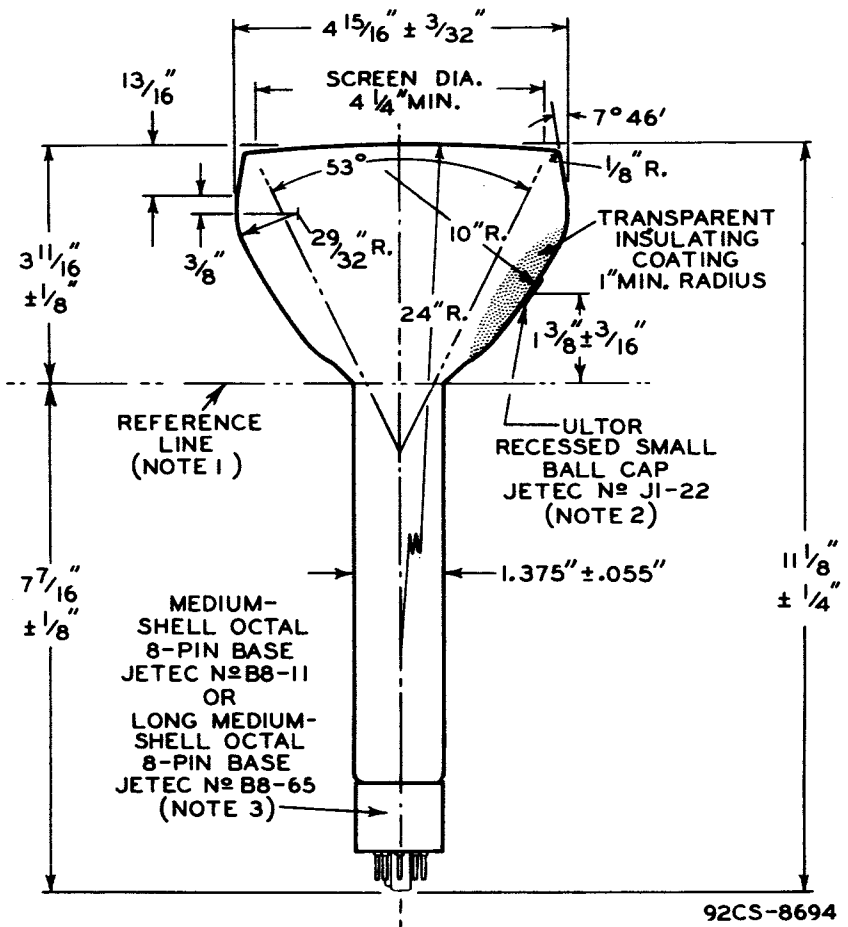
For ultor voltage of 7000 volts. 0.013 max. Δ inch

- * At or near this rating, the effective resistance of the ultor supply should be adequate to limit the ultor input power to 6 watts.
- # Brilliance and definition decrease with decreasing ultor voltage. Recommended minimum ultor voltage for the 5AHP7 is 5000 volts; recommended minimum for the 5AHP7-A is 7000 volts.
- ## With the tube shielded from extraneous fields, the center of the undelected, focused, low-intensity spot will fall within a circle having a 5/16-inch radius concentric with the center of the tube face.
- Δ With JETEC Deflecting Yoke No.120, or equivalent, and under the following conditions: heater voltage of 6.3 volts, ultor current of 100 microamperes, grid-No.2 voltage of 300 volts, and a 49-line raster. Raster width is adjusted to 11.4 cm and the grid-No.4 voltage is adjusted to give sharpest focus at center of tube face. Raster height is contracted until individual scanning lines are just barely distinguishable. Line width is expressed as the quotient of the contracted raster height measured at the center line of the tube face divided by the number of scanning lines (49).



5AHP7
5AHP7-A

5AHP7, 5AHP7-A OSCILLOGRAPH TUBE



NOTE 1: THE PLANE THROUGH THE TUBE AXIS AND PIN 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 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.

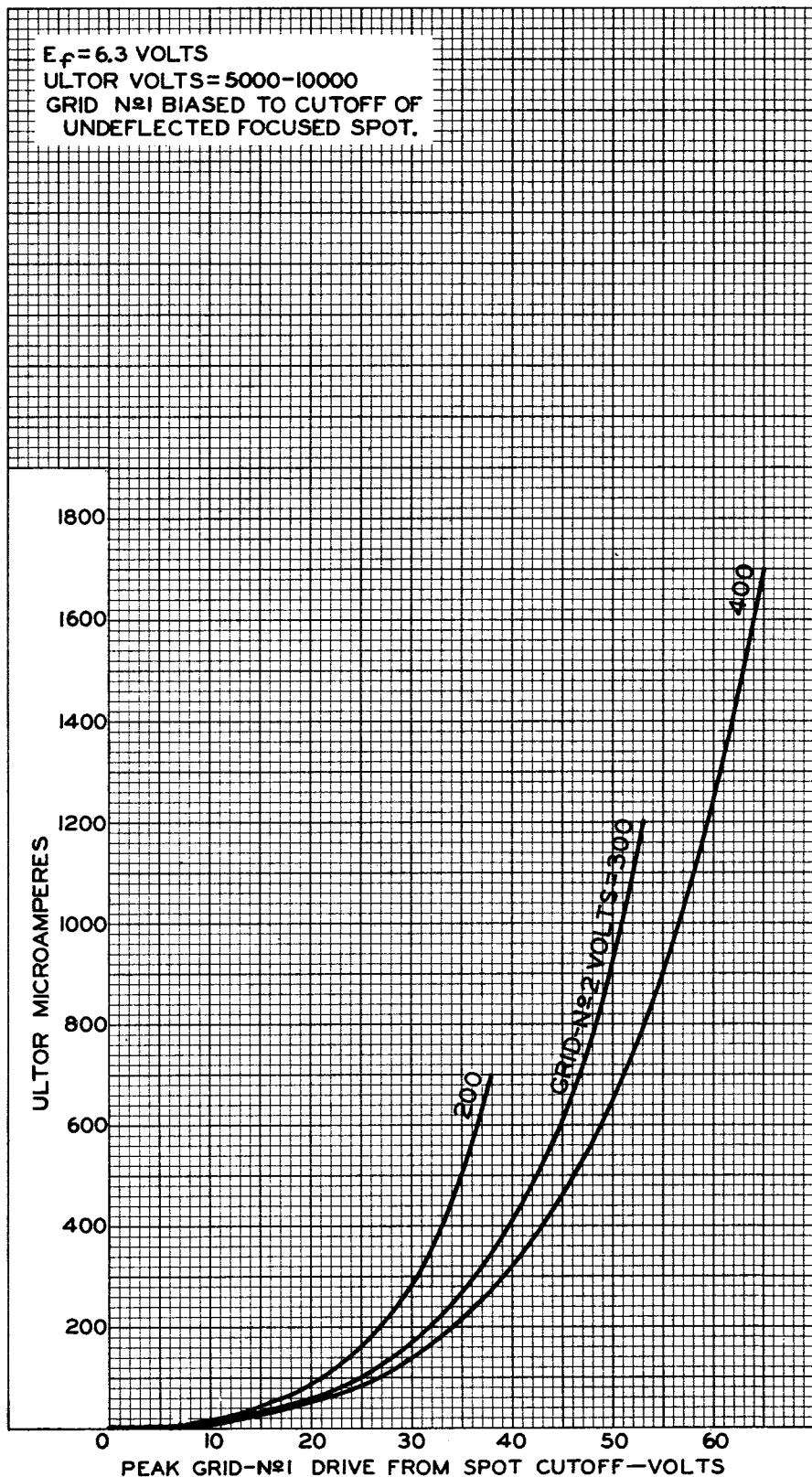
NOTE 3: ϕ OF BULB WILL NOT DEVIATE MORE THAN 2° IN ANY DIRECTION FROM THE PERPENDICULAR ERECTED AT THE CENTER OF THE BOTTOM OF THE BASE.

5AHP7
5AHP7-A



5AHP7, 5AHP7-A

AVERAGE GRID-DRIVE CHARACTERISTICS



TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-9088