

NORTH AMERICAN PHILIPS CO., INC.

DOBBS FERRY, N. Y.

ELECTRONIC TUBE DIV. COMPLETE TUBE OUTLINE

*7HP4 TELEVISION TUBE

Electromagnetic Deflection and Focus

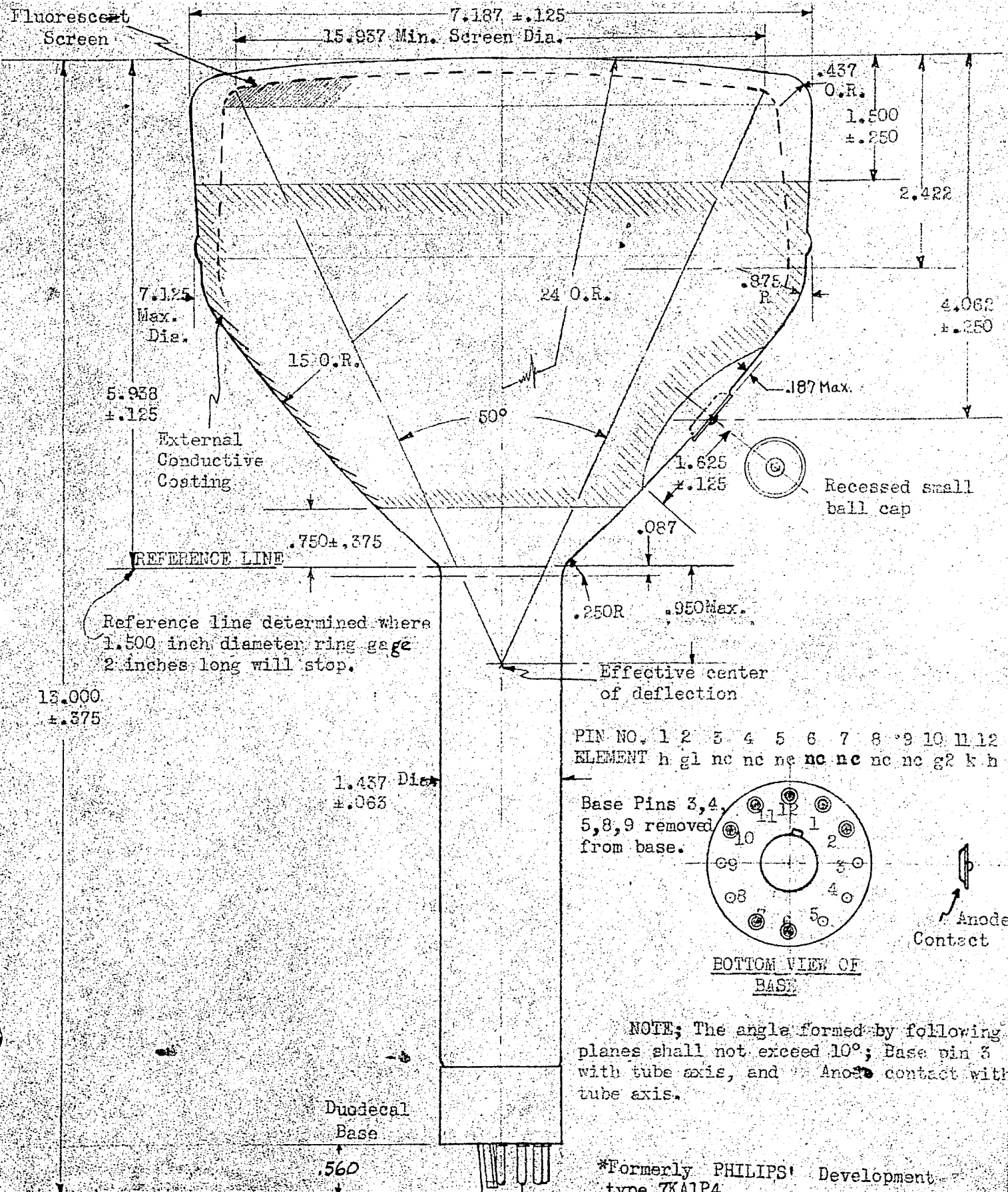
SUBJECT

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ISSUE 3



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SUBJECT 7HP4 TELEVISION TUBE
MAGNETIC DEFLECTION AND FOCUS

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PHYSICAL DETAILS

Bulb Diameter
Picture Size
Deflection Angle
Overall Length
Bulb Anode Terminal
Base
Screen Phosphor
Operation Features:
Deflection Method
Focussing Method
External Coating

$7\frac{3}{16} \pm \frac{1}{8}$ "
 $4\frac{1}{2} \times 5\frac{1}{4}$ " Approximately
50°
 $13 \pm \frac{3}{8}$ "
Recessed Small Ball Cap
Small Shell Duodecal, 7 Pin
No. 4 (White)

Magnetic
Magnetic
Conductive

Capacitances:

Grid #1 to all Other Electrodes
Cathode to all Other Electrodes
External Conductive Coating to Anode

9 uuf Max., 3 uuf Min.
8 uuf Max., 2 uuf Min.
500 uuf Max.

ELECTRICAL RATINGS (Design Maximum Values)

Anode (Beam Collecting Electrode) Note 1
Grid #2 (Accelerating Electrode)
Grid #1 (Control Electrode)

8,800 volts Max. (D.C.)
450 volts Max. (D.C.)
+2 volts Max. (D.C.)
-100 volts Max. (D.C.)
±125 volts Max.
1.5 Megohms Max.

Heater Cathode Bias
Grid #1 Circuit Resistance

TYPICAL OPERATING CONDITIONS

Heater Voltage
Heater Current
Anode Voltage
Grid #2 Note 2
Grid #1 Voltage for Visual Cutoff
Light Output
Anode Current
Capacitances:
Grid #1 to all Other Electrodes
Cathode to all Other Electrodes

$6.3 \pm 10\%$ volts
.6 amps.
6000 volts
250 volts
 $-55 \pm 40\%$ volts
See Curve A
See Curve B

7 uuf
5 uuf

Note 1 Brilliance and definition of the picture decreases with decreasing Anode potentials and it is suggested that the value be not less than 5000 volts.

Note 2 If it is desired to operate all tubes at a fixed cutoff value of -55 volts, Eg2 should be adjusted to $250 \text{ V} \pm 40\%$.

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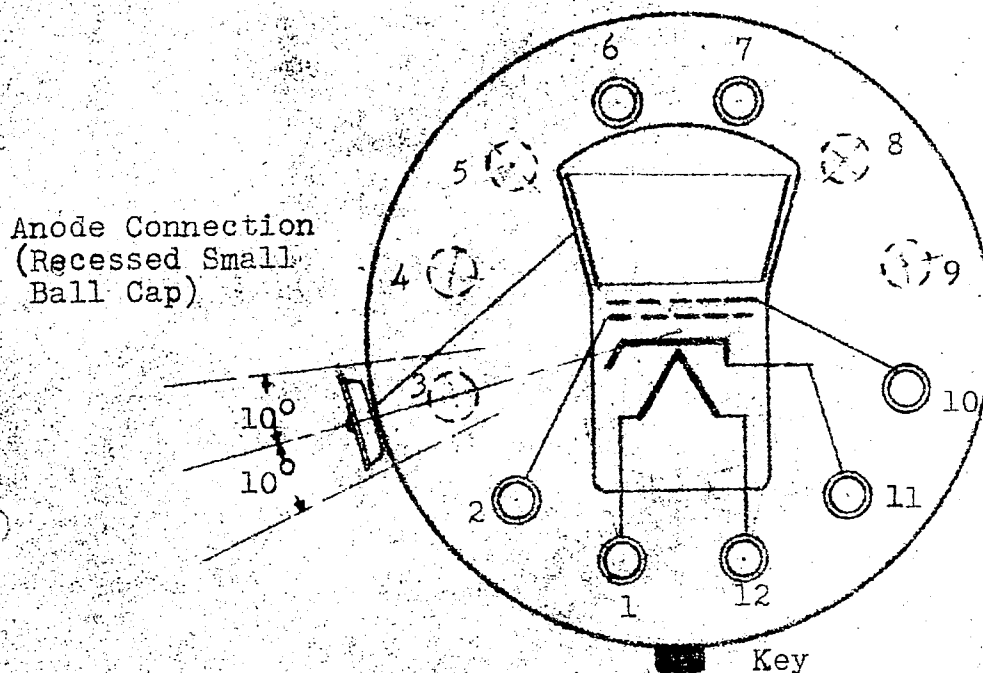
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SUBJECT 7HP4 TELEVISION TUBE TYPE
Magnetic Focus & Deflection

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Note Pins 3,4,5,8,9 removed from Base Shell



Bottom View of Base

<u>Pin No.</u>	<u>Description</u>	<u>Max. Voltage Ratings</u>
1	Heater	6.3 Volts $\pm$ 10%
2	Grid #1	-100 to +2 Volts
6,7	Not Connected	
10	Grid #2	450 Volts Max.
11	Cathode	All element voltages with respect to cathode
Side Seal Ball Cap	High Voltage Anode	8800 Volts

TYPICAL OPERATING CONDITIONS

Anode Voltage	6000 Volts	
Grid #2 Voltage	250 Volts	
Grid #1 Voltage for Visual Cutoff	-55 Volts	$\pm$ 40%
Grid #2 Current	$\pm$ 15 ua DC	
Anode Current for highlight brightness	75 ua	

