

NORTH AMERICAN PHILIPS CO., INC.

DOBB'S FERRY, N. Y.

ELECTRONIC TUBE DIV. COMPLETE TUBE OUTLINE

*7HP4 TELEVISION TUBE

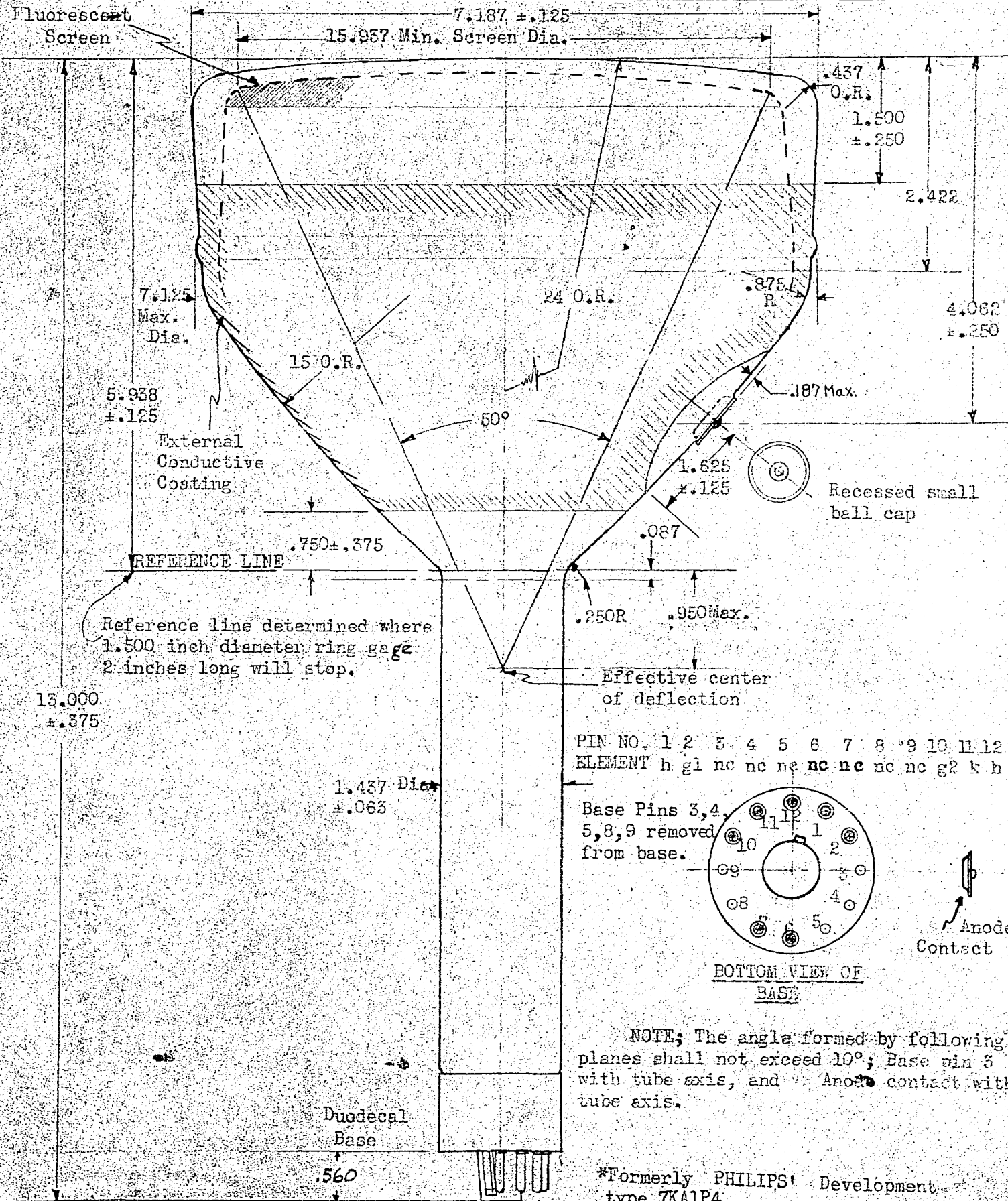
SUBJECT Electromagnetic Deflection and Focus

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ISSUE 3



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SUBJECT 7HP4 TELEVISION TUBE
MAGNETIC DEFLECTION AND FOCUS

PROCESS NO. _____
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PHYSICAL DETAILS

Bulb Diameter	$7\frac{3}{16} \pm \frac{1}{8}$ "
Picture Size	4" x 5 $\frac{1}{4}$ " Approximately
Deflection Angle	50°
Overall Length	13 ± 3/8"
Bulb Anode Terminal	Recessed Small Ball Cap
Base	Small Shell Duodecal, 7 Pin
Screen Phosphor	No. 4 (White)
Operation Features:	
Deflection Method	Magnetic
Focussing Method	Magnetic
External Coating	Conductive
Capacitances:	
Grid #1 to all Other Electrodes	9 uuf Max., 3 uuf Min.
Cathode to all Other Electrodes	8 uuf Max., 2 uuf Min.
External Conductive Coating to Anode	500 uuf Max.

ELECTRICAL RATINGS (Design Maximum Values)

Anode (Beam Collecting Electrode) Note 1	8,800 volts Max. (D.C.)
Grid #2 (Accelerating Electrode)	450 volts Max. (D.C.)
Grid #1 (Control Electrode)	+2 volts Max. (D.C.)
	-100 volts Max. (D.C.)
Heater Cathode Bias	±125 volts Max.
Grid #1 Circuit Resistance	1.5 Megohms Max.

TYPICAL OPERATING CONDITIONS

Heater Voltage	6.3 ± 10% volts
Heater Current	.6 amps.
Anode Voltage	6000 volts
Grid #2 Note 2	250 volts
Grid #1 Voltage for Visual Cutoff	-55 ± 40% volts
Light Output	See Curve A
Anode Current	See Curve B
Capacitances:	
Grid #1 to all Other Electrodes	7 uuf
Cathode to all Other Electrodes	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 V ± 40%.

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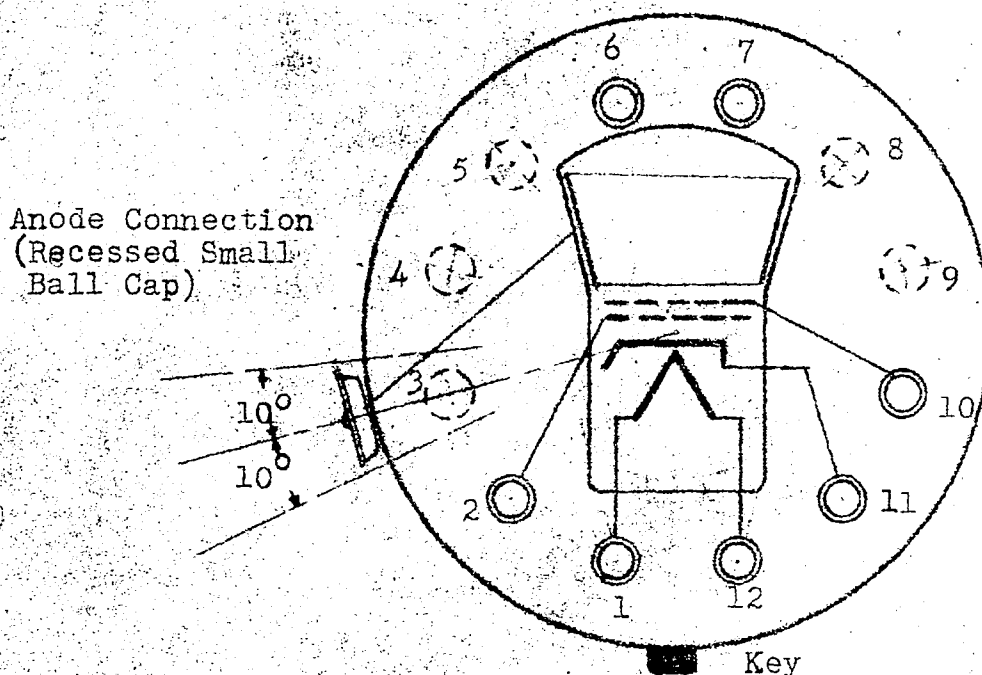
SUPERSEDES

SUBJECT 7HP4 TELEVISION TUBE TYPE
Magnetic Focus & Deflection

PROCESS NO. _____

ISSUE 3

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



Bottom View of Base

Pin No.	Description	Max. Voltage Ratings
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

