

LANSDALE



TUBE COMPANY

A wholly owned subsidiary of Philco Corporation.

21 CHURCH ROAD, LANSDALE, PA., LANSDALE 4681

7SP7

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Supersedes -

7SP7 Cathode Ray Tube

The 7SP7 is a magnetic focus and magnetic deflection cathode ray tube having a long persistence cascade fluorescent screen. A special feature of the 7SP7 is that it produces a small spot of high intensity.

GENERAL CHARACTERISTICS

Electrical

Heater Voltage	6.3	volts
Heater Current	.06 \pm 10%	amperes
Focusing Method	Magnetic	
Deflecting Method	Magnetic	
Approximate Deflecting Angle	50	degrees
Phosphor	P7	
Fluorescence	Blue	
Phosphorescence	Greenish-yellow	
Persistence	Long	
Direct Interelectrode Capacitances, Approx.		
Cathode to all other electrodes	3.5	uuf
Grid #1 to all other electrodes	4.0	uuf
External Conductive Coating to Anode Capacitance	500	max uuf
	100	min uuf

Mechanical

Overall Length	14-1/16 + 3/8	inches
Greatest diameter of bulb	7-3/16 ± 1/8	inches
Minimum Useful Screen Diameter	6	inches
Bulb Contact	J1-21	
Base	B5-57	
Basing	12G	
Bulb Contact Alignment		
J1-21 contact aligns with vacant pin position #3	+30	degrees

MAXIMUM RATINGS Design Center Values

Anode Voltage ¹	20,000	max	volts DC
Grid #1 Voltage			
Negative-Bias Value	350	max	volts DC
Positive-Bias Value	0	max	volts DC
Positive-Peak Value	2	max	volts DC
Peak Heater-Cathode Voltage ²			
Heater Negative with respect to cathode			
During warm-up period not to exceed 15 seconds	410	max	volts DC
After equipment warm-up period	175	max	volts DC
Heater Positive with respect to cathode	175	max	volts DC

TYPICAL OPERATING CONDITIONS

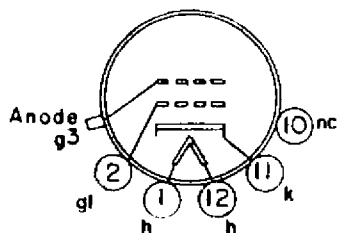
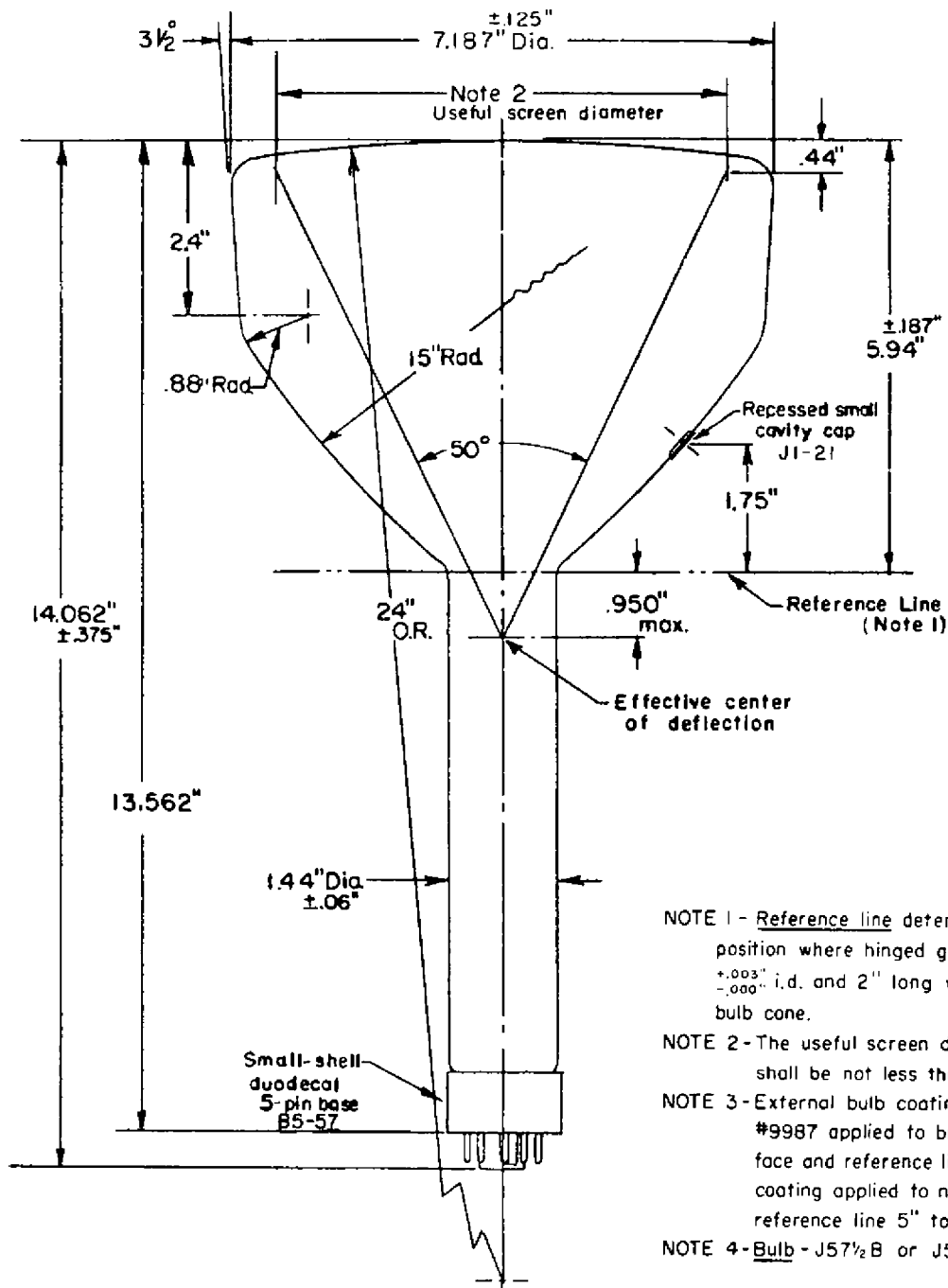
Anode Voltage	20,000		volts DC
Grid #1 Voltage ³	-70 to -140		volts DC
Focusing Coil Current ⁴	195	approx	Ma DC
Spot Position	15	max	MM

MAXIMUM CIRCUIT VALUES

Grid #1 Circuit Resistance	1.5	max	Megohms
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NOTES

1. Anode and Grid #2, which are connected together within the tube, are referred to herein as anode.
2. Cathode should be returned to one side or to the mid-tap of the heater transformer winding.
3. Visual extinction of undeflected focused spot.
4. For standard focus coil 106 or equivalent, with the combined Grid #1 bias voltage and video signal voltage adjusted for 100 microamperes of anode current. The distance from the air gap in the focus coil to the reference line is 3.25 inches.



7SP7