

LANSDALE



TUBE COMPANY

A wholly owned subsidiary of Philco Corporation.

21 CHURCH ROAD, LANSDALE, PA., LANSDALE 4681

10KP17
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Issue Date Jan. 26, 1951
Supersedes

Type 10KP17

The 10KP17 is a magnetic focus and magnetic deflection oscillograph tube for special radar applications. A special feature of the tube is the P17 screen which combines a very short persistence greenish fluorescence with a long persistence yellow phosphorescence. Another feature is a metal backed screen to enhance light output.

GENERAL CHARACTERISTICS

Electrical

Heater Voltage	6.3		Volts
Heater Current	0.6	10%	Amperes
Focusing Method	Magnetic		
Deflecting Method	Magnetic		
Approximate Deflecting Angle	50		Degrees
Phosphor			
Fluorescence	Greenish		
Phosphorescence	Yellow		
Persistence - Fluorescent screen	Very Short		
Phosphorescent screen	Long		
Direct Interelectrode Capacitances, approx.			
Cathode to all other electrodes	5.0		μmf
Grid #1 to all other electrodes	6.0		μmf

Mechanical

Overall Length	17-5/8	$\pm 3/8$	Inches
Greatest Diameter of Bulb	10-1/2	$\pm 1/8$	Inches
Minimum Useful Screen Diameter		9-1/8	Inches
Bulb Contact		J1-21	
Base		B5-57	
Basing		12D	
Bulb Contact Alignment			
J1-21 contact aligns with vacant pin position #3		± 10	Degrees

MAXIMUM RATINGS Design Center Values

Anode Voltage ¹	12,000	Max	Volts D-C
Grid #2 Voltage			
Positive Value (DC or Peak AC)	700	Max	Volts
Negative Value (DC or Peak AC)	180	Max	Volts
Grid #1 Voltage			
Negative - Bias Value	180	Max	Volts D-C
Positive - Bias Value ²	0	Max	Volts D-C
Positive - Peak Value	2	Max	Volts
Peak Grid #1 Drive from Cutoff	65	Max	Volts
Peak Heater - Cathode Voltage ³			
Heater Negative with respect to cathode			
During warm-up period not to exceed 15 seconds	410	Max	Volts D-C
After Equipment warm-up period	150	Max	Volts D-C
HEATER POSITIVE WITH RESPECT TO CATHODE	150	Max	Volts D-C

TYPICAL OPERATING CONDITIONS

Anode Voltage	9000		Volts
Grid #2 Voltage	250		Volts
Grid #1 Voltage	-27 to -63		Volts
Focusing Coil Current ⁵	105	Approx	Ma D-C
Spot Position (undeflected)	18	Max	Millimeters

MAXIMUM CIRCUIT VALUES

Grid #1 Circuit Resistance	1.5	Max	Megohms
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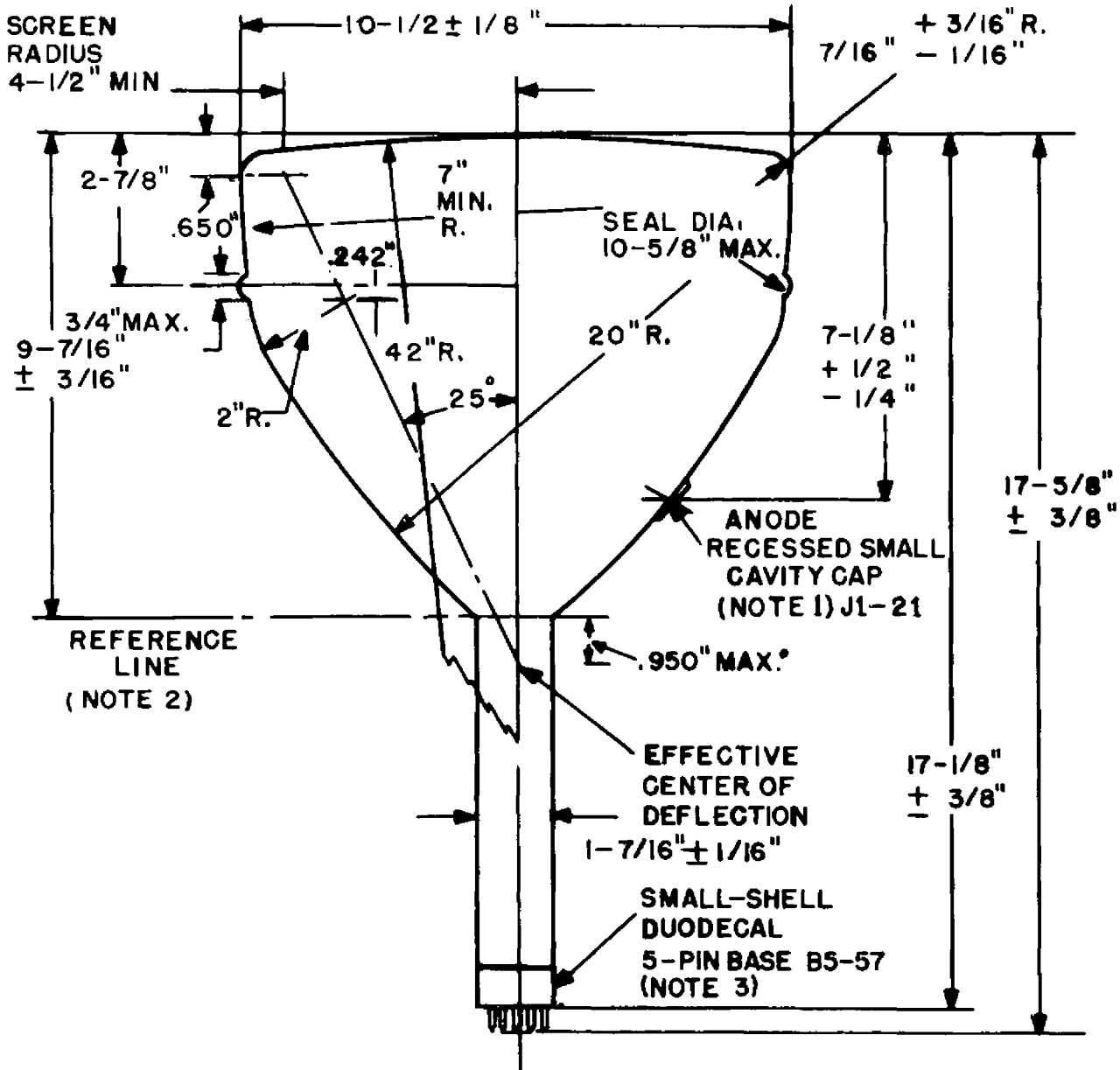
NOTES

1. Anode and Grid #3 which are connected together within the tube are referred to herein as anode.
2. At or near this rating, the effective resistance of the anode supply should be adequate to limit the anode input power to 6 watts.
3. Cathode should be returned to one side or to the mid-tap of the heater transformer winding.
4. Visual extinction of undeflected focused spot.
5. For standard focus coil RMA #106, or equivalent, with a total anode current of 200 microamperes and with distance (D) from reference line to center of air gap equal to 3.25 inches.

10KP17 NOTES

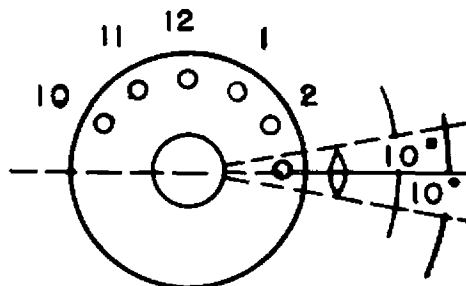
- NOTE 1: The plane through the tube axis and vacant pin position No. 3 may vary from the plane through the tube axis and anode terminal by an angular tolerance (measured about the tube axis) of 10° . Anode terminal is on same side as vacant pin position No. 3.
- NOTE 2: Reference line is determined by position where hinged gauge 1.500" \pm .003" - .000" I. D. and 2" long will rest on bulb cone.
- NOTE 3: Socket for this base should not be rigidly mounted; it should have flexible leads and be allowed to move freely. Bottom circumference of base shell will fall within circle concentric with bulb axis and having diameter of 1-7/8".

10KPI7



BASING

- 1- HEATER
- 2- #1 GRID
- 10- #2 GRID
- 11- CATHODE
- 12- HEATER



BOTTOM VIEW OF BASE