

TYPE T317P CATHODE-RAY TUBE DATA

The Type T317P is a single-gun, three-inch, flat-faced, aluminized Cathode-Ray tube with electrostatic focus and deflection and has a post-accelerator helix. This tube was designed for use in the Tektronix Type 317 Oscilloscope.

MECHANICAL DATA:

Bulb Contact Alignment	Post-accelerator contact aligns with base pin #1 (± 30 degrees).
	Centerline between D ₁ -D ₂ neck Pins aligns with P-a contact (± 5 deg.)
Trace Alignment	Angle between D ₁ -D ₂ and D ₃ -D ₄ (90 ± 1 degree)
	J1-21 aligns with trace of D ₁ -D ₂ (± 5 degrees)
	Positive voltage on D ₁ deflects beam toward J1-21 button.

ELECTRICAL DATA:

Direct Interelectrode Capacitance, Approximate:

Cathode to all other electrodes	4.78 μuf	D ₁ to all other electrodes except D ₂	2.96 μuf
Grid #1 to all other electrodes	5.76 μuf	D ₂ to all other electrodes except D ₁	2.90 μuf
D ₁ -D ₂	1.88 μuf	D ₃ to all other electrodes except D ₄	2.51 μuf
D ₃ -D ₄	1.19 μuf	D ₄ to all other electrodes except D ₃	2.43 μuf
Post-accelerator helix resistance			200-600 Megohms

TYPICAL OPERATING CONDITIONS:

Heater Voltage	6.3 volts
Heater Current	0.6 $\pm 10\%$ Ampere

All voltages taken with respect to the Cathode.

Post-accelerator voltage	9000 volts
Isolation shield and lower helix (Geometry Adjustment)	1450-1550 volts
Second Anode (A ₂) (Astigmatism Adjust)	1375-1675 volts
First Anode (A ₁)	1600 volts
Grid #3 (Focus Electrode)	200-550 volts
Grid #1 (Control Grid)	-90-0 volts

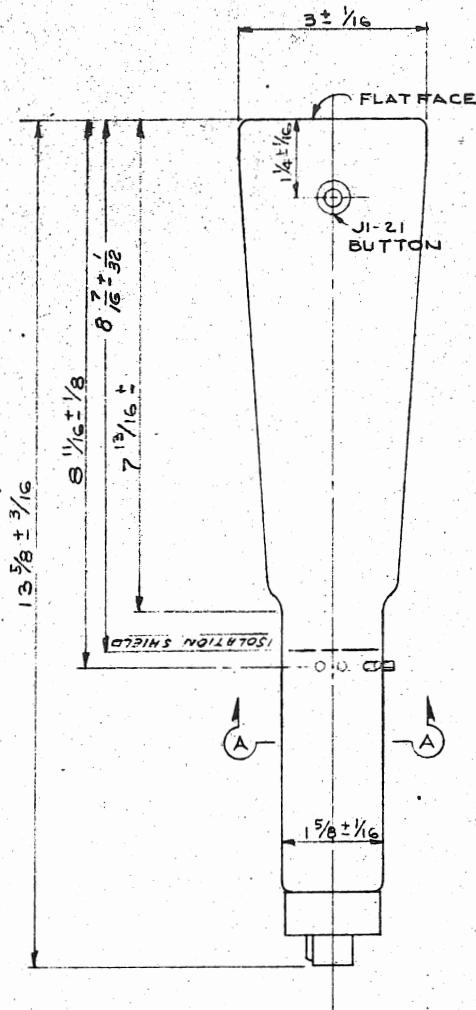
GENERAL DATA:

Deflection Factors: (1 div. = 0.25 inches)

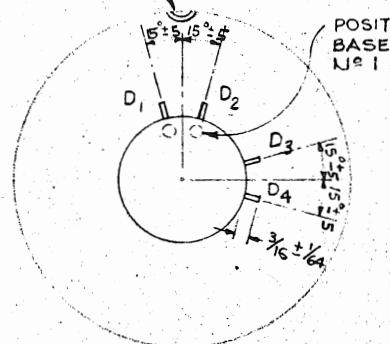
D ₁ -D ₂	16.2 to 20 v/div.
D ₃ -D ₄	6.0 to 7.5 v/div.
Useful Scan (D ₁ -D ₂) (D ₃ -D ₄)	10 div. (minimum) 8 div. (minimum)

Ratio of Post Accelerator voltage to Accelerator voltage 5.5

Pattern Distortion: Distortion of the useful scan, 1% maximum. Angle between D₁-D₂ and D₃-D₄ traces is 90 degrees ± 1 degree.

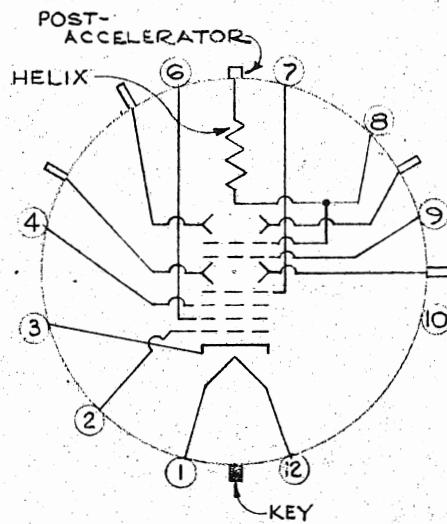


POST-ACCELERATOR
CONTACT.



SECTION A-A

PIN N°	ELEMENT
1	HEATER
2	GRID
3	CATHODE
4	FOCUSING ELECTRODE
6	ANODE N° 1
7	ANODE N° 2
8	ISOLATION SHIELD
9	DEFLECTION PLATE SHIELD
10	N.C.
12	HEATER



BASE VIEW

CATHODE-RAY TUBE DEPARTMENT	
TEKTRONIX, INC.	
PORTLAND, OREGON, U.S.A.	
DATA SHEET	
TITLE: TENTATIVE	
MATERIAL:	
GUN TYPE: T 317 (T 33)	
1	MARK:
4-20-59	SCALE: NO.
U.S.	DATE: 1-17-59
	ENGR. R.H.U. DR. BY: J.S.
	DWG. NO. C.R.T. B-T 317-1
	PART NO.
	BY: