

TYPE T551 (T57P_) CATHODE RAY TUBE DATA

Type T551P is a dual-gun 5-inch cathode ray tube with electrostatic focus and deflection designed for use in the Type 551 oscilloscope. The flat faced envelope has a post accelerator helix and an aluminized screen. Two identical electron guns with separate vertical deflection systems share a common horizontal deflection system.

RATINGS:

MAXIMUM VALUES
(All voltages taken with respect to cathode)

TYPICAL VALUES

Post-Accelerator (6,000 v minimum)	12,000 v DC	10,000 v
Isolation Shield & Lower Helix (Geom)	2,100 v DC	1575 to 1700 v
Deflection Plate Shield	2,100 v DC	1640 to 1660 v
Accelerator	6 watts input	
Anode No. 1	2,000 v DC	1660 v
Anode No. 2	2,000 v DC	1575 to 1850 v
Ratio Post-Accelerator Voltage to Accelerator Voltage	6 Maximum	
Grid No. 3 (Focus)	800 v DC	180 to 590 v
Grid No. 1		
Negative Bias	200 v DC	-50 to -80 v (cutoff)
Positive Bias	0 v DC	
Positive Peak	2 v	
Circuit Resistance	1.5 MΩ	
Heater to Cathode Voltage	±125 v DC	
Deflection Factors		
D1 and D2		27 to 32.5 v/cm
D3 and D4; D5 and D6		5.9 to 7.0 v/cm

Post-Accelerator Helix Resistance is 200-600 Megohms

Heater is 6.3 volts at 1.2 amperes ±10%

DIRECT INTERELECTRODE CAPACITANCE, Approximate:

Cathode A,B to all other electrodes	5.0 μf	D1 to all other electrodes except D2	5.2 μf
Grid No. 1 A to all other electrodes	6.2	D2	D1 5.2
Grid No. 1 B to all other electrodes	6.5	D3	D4 3.1
D1 to D2	3.1	D4	D3 3.6
D3 to D4; D5 to D6	2.2	D5	D6 3.6
		D6	D5 3.1

SPECIFICATIONS:

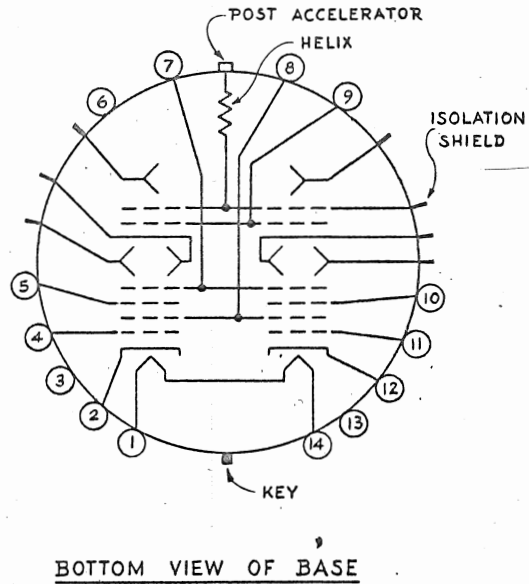
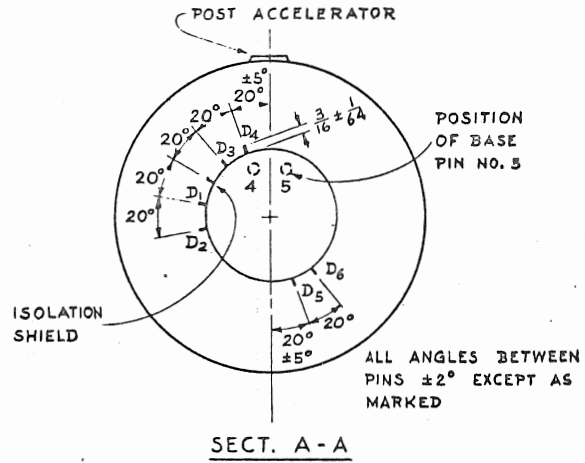
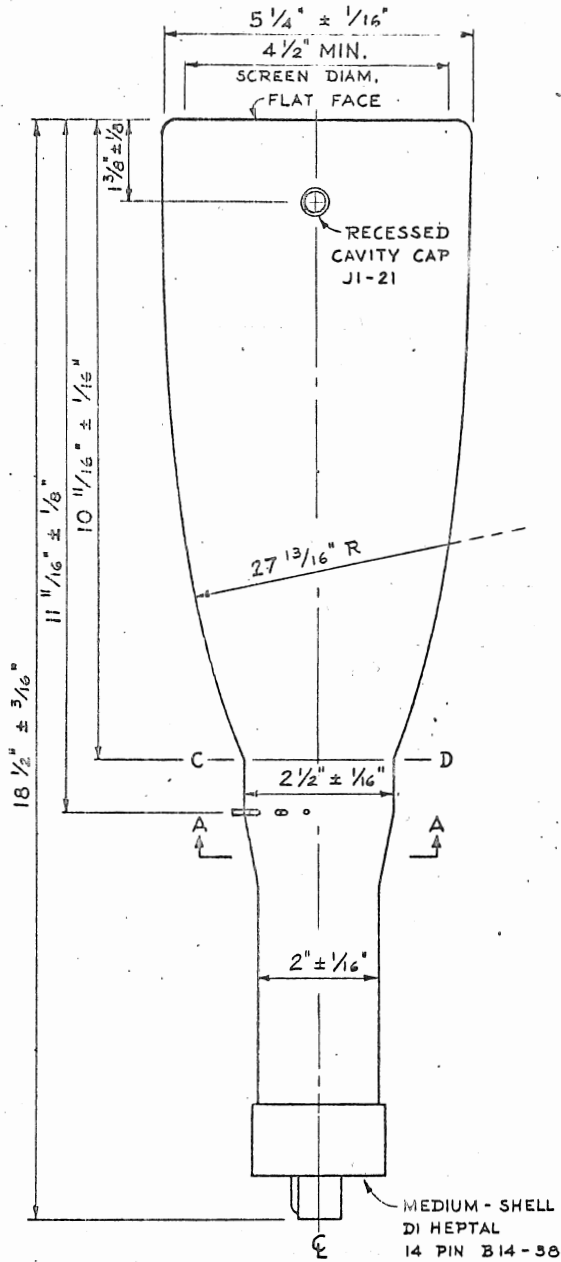
Useful scan: D1-D2, 10 cm minimum; D3-D4 and D5-D6, 4 cm minimum with 2 cm overlap.

Pattern Distortion: Distortion of useful scan, 1.5% maximum. Angle between D1-D2 and D3-D4 or D5-D6 traces is 90° ±1°. With a 4 by 10 cm rectangular raster; the 10 cm centered on the face of the tube and the 4 cm offset 1 cm ±0.4 cm (gun A offset toward Pin No. 1 and gun B offset toward Pin No. 8); The raster edges will not deviate from straight parallel lines by more than 0.6 mm total along the 4 cm sides, nor by more than 0.5 mm total along the 10 cm sides.

The J1-21 contact aligns with the D1-D2 trace within ±10°. Pin No. 1 aligns with the D3-D4 trace within ±10°.

A positive voltage on D1 deflects the beam toward Pin No. 4 and 5. A positive voltage on D3 or D5 deflects the beam toward Pin No. 1. The deflection systems are designed to intercept part of the electron beam; hence a low impedance deflection plate drive is desirable.

T551 CRT
TENTATIVE DATA



PIN NO.	ELEMENT
1	HEATER
2	"A" CATHODE
3	NC
4	"A" GRID NO. 1
5	"A" FOCUSING ELECTRODE
6	NC
7	COMMON SECOND ANODES
8	COMMON FIRST ANODES
9	DEFLECTION-PLATE SHIELDS
10	"B" FOCUSING ELECTRODE
11	"B" GRID NO. 1
12	"B" CATHODE
13	NC
14	HEATER