

ELECTRONIC TUBE REFERENCE

4NP1

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
CATHODERAY

Rectangular mono-accelerator instrument CRT designed for equipment exposed to extreme shock, severe vibration, and altitudes above 50,000 feet. Its ruggedized construction suits airborne or similarly demanding oscillographic installations.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 600 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Cathode Ray
No fixed ratings recorded. Cathode-ray electron-gun section; CRT-specific ratings are retained in TUBE_SECTION_PARAMETER because fixed plate/screen fields are not semantically equivalent.

The ETC 4NP1 is a 4 by 1.75 inch rectangular mono-accelerator cathode-ray tube designed for equipment subject to extreme shock, severe vibration, and altitudes above 50,000 feet.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1961 Electronic Tube Corp

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1961 ELECTRONIC TUBE CORP

Section 1 · Cathode Ray

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current nominal	600 mA	—
Maximum accelerator voltage	3000 V	—
Maximum focusing voltage	1500 V	—
Maximum accelerator-to-deflection-electrode voltage	550 V	—
Maximum negative grid-1 bias magnitude	200 V	—
Maximum positive grid-1 bias	0 V	—
Maximum heater-to-cathode voltage magnitude	180 V	—
Typical accelerator voltage	2500 V	—
Typical focusing voltage	610–710 V	—
Typical grid-1 voltage	-100--60 V	—
Maximum operating altitude	70000 ft	—
Useful scan D1-D2	3.5 in	—
Useful scan D3-D4	1.25 in	—

CONSTRUCTION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Focusing method	Electrostatic	—
Deflecting method	Electrostatic	—
Electron gun / beam count	1	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Phosphor options	P1,P2,P7,P11	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode to all other electrodes	4.5–5.5 pF	—
Grid 1 to all other electrodes	4–5 pF	—