



ELECTRONIC TUBE REFERENCE

6844A

Nixie electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

NIXIE

Gas-filled cold-cathode ten-digit Nixie indicator with common anode and suppressor screen for direct numerical display.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	13
NOMINAL HEATER	— / —	PARALLEL HEATER	— / —
HEATING	Indirect; cold cathode	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Nixie	
MAXIMUM CATHODE CURRENT	4 mA
MINIMUM REGULATOR CURRENT	1.5 mA
MAXIMUM REGULATOR CURRENT	3 mA
STARTING VOLTAGE	170 V
MAINTAINING VOLTAGE	135 V
Special-purpose display/switching section. Published non-promoted ratings are retained in TUBE_SECTION_PARAMETER.	

Gas-filled cold-cathode ten-digit Nixie indicator with common anode and suppressor screen. The sheet provides cold-cathode starting/supply limits and recommended current-limiting resistor operation.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1961 Nixie Burroughs

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

1961 NIXIE BURROUGHS

Section 1 · Nixie

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ionization Voltage Maximum	170 V	—
Supply Voltage Minimum	170 V	Catalog minimum supply voltage
Cathode Current Peak	4 mA	—
Cathode Current Average	2 mA	—
Individual Cathode Wattage Maximum	0.4 W	—
Test Supply Voltage	170 V	—
Test Series Resistor	15 kOhm	—
Display Size Class	Standard	—
Numeral Height	0.61 in	—
Recommended Socket	HSK106 or HSK112	—
Recommended Supply Voltage	170 V	Series resistor 15 kOhm
Recommended Series Resistor	15 kOhm	Supply voltage 170 V
Recommended Supply Voltage	250 V	Series resistor 56 kOhm
Recommended Series Resistor	56 kOhm	Supply voltage 250 V
Recommended Supply Voltage	300 V	Series resistor 82 kOhm
Recommended Series Resistor	82 kOhm	Supply voltage 300 V

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode Current Minimum	1.5 mA	—
Cathode Current Maximum	3 mA	—

ENVIRONMENTAL		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Shock	55 G	—
Vibration	10 G	60 cps
Operating Temperature Range	-65 to +70 C	—
Altitude	70000 ft	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Burroughs

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

1963 BURROUGHS

Section 1 · Nixie

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ionization Voltage	170 V	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Anode Current	4 mA	—
Average Anode Current	2.5 mA	—
Individual Cathode Dissipation	0.4 W	—
Anode Supply Voltage	170 V	—
Anode Series Resistance	15000 ohm	—
Anode Current Minimum	1.5 mA	—
Anode Current Maximum	2.5 mA	—



1969 Nixie Zennippon Shinkukan

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

1969 NIXIE ZENNIPPON SHINKUKAN
Section 1 · Nixie

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Displayed symbols	0–9	—
Discharge maintaining voltage	135 V	Approximate

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Connection diagram number	1	See source basing/connection diagram
Maximum overall length	35.6 mm	—
Maximum display diameter	27.5 mm	—
Maximum power consumption	0.4 W	—
Anode supply DC voltage	170 V	Operating point at 170 V
Average anode current	—2.5 mA	AnodeSupplyVoltage=170V; less than
Series resistor Rp	15 k0hm	AnodeSupplyVoltage=170V
Anode supply DC voltage	250 V	Operating point at 250 V
Average anode current	—2.5 mA	AnodeSupplyVoltage=250V; less than
Series resistor Rp	47 k0hm	AnodeSupplyVoltage=250V
Anode supply DC voltage	300 V	Operating point at 300 V
Average anode current	—2.5 mA	AnodeSupplyVoltage=300V; less than
Series resistor Rp	75 k0hm	AnodeSupplyVoltage=300V



TUBE TINKER
ELECTRON TUBE DATABASE

SOURCE DATA APPENDIX

196X Burroughs Nixie

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ionization voltage	170 V	Absolute rating; maximum
Minimum supply voltage	170 V	Absolute rating; minimum recommended supply
Cathode current	4 mA	Peak
Cathode current	2 mA	Average
Individual cathode dissipation	0.4 W	Maximum
Anode supply voltage	170 V	BasicCircuit test condition
Anode series resistor	15 k0hm	BasicCircuit test condition
Cathode current	1.5–3 mA	BasicCircuit test condition
Numeral height	0.61 in	Standard
Recommended anode series resistor	15 k0hm	Anode supply 170 V
Recommended anode series resistor	56 k0hm	Anode supply 250 V
Recommended anode series resistor	82 k0hm	Anode supply 300 V
Pre-bias voltage	75–120 V	Referenced to on cathode



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

196X Nixie Random Datasheets

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

196X NIXIE RANDOM DATASHEETS

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Supply voltage minimum	170 V	—
Ionization voltage maximum	170 V	—
Peak cathode current maximum	4 mA	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Individual cathode power dissipation maximum	0.4 W	—
Anode series resistor	15 kΩ	SupplyVoltage=170V
Anode series resistor	47 kΩ	SupplyVoltage=250V
Anode series resistor	75 kΩ	SupplyVoltage=300V

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode current range	1.5–2.5 mA	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 Nixie RFT

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

1971 NIXIE RFT

Section 1 · Nixie

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Comparable RFT Type	Z560M	Catalog cross-reference; comparable types are not guaranteed identical
Minimum Operating Supply Voltage	170 V	Published for comparable RFT type Z560M
Cathode Current Minimum	1 mA	Published for comparable RFT type Z560M
Cathode Current Maximum	2.5 mA	Published for comparable RFT type Z560M
Peak Cathode Current	10 mA	Published for comparable RFT type Z560M
Ambient Temperature Minimum	-50 °C	Published for comparable RFT type Z560M
Ambient Temperature Maximum	70 °C	Published for comparable RFT type Z560M
Symbol Height	15.5 mm	Published for comparable RFT type Z560M
Maximum Viewing Distance	10 m	Published for comparable RFT type Z560M
Maximum Bulb Height	26.5 mm	Published for comparable RFT type Z560M
Maximum Bulb Diameter	30.1 mm	Published for comparable RFT type Z560M

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode Striking Voltage	145 V	Published for comparable RFT type Z560M
Anode Maintaining Voltage	135 V	Published for comparable RFT type Z560M
Anode Extinction Voltage	120 V	Published for comparable RFT type Z560M

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