

ELECTRONIC TUBE REFERENCE

7009

Nixie electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
NIXIE

Gas-filled cold-cathode Nixie numerical/readout tube for direct digit indication in electronic instruments and counting equipment.

GENERAL CHARACTERISTICS

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

SECTION RATINGS

SECTION1 Nixie	
MAXIMUM CATHODE CURRENT	2 mA
MINIMUM REGULATOR CURRENT	0.7 mA
MAXIMUM REGULATOR CURRENT	1.2 mA
STARTING VOLTAGE	170 V
Special-purpose display/switching section. Published non-promoted ratings are retained in TUBE_SECTION_PARAMETER.	

7009 is a gas-filled cold-cathode Nixie numerical/readout device. The shared catalog identifies it with the 7009 electrical family, using a maximum ionization voltage of 170 V and a recommended minimum supply of 170 V.

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	2 mA	—
Cathode Current Average	1 mA	—
Individual Cathode Wattage Maximum	0.2 W	—
Test Supply Voltage	170 V	—
Test Series Resistor	68 kOhm	—
Display Size Class	Miniature	—
Numeral Height	0.305 in	—
Recommended Socket	SK116	—
Recommended Supply Voltage	170 V	Series resistor 68 kOhm
Recommended Series Resistor	68 kOhm	Supply voltage 170 V
Recommended Supply Voltage	250 V	Series resistor 150 kOhm
Recommended Series Resistor	150 kOhm	Supply voltage 250 V
Recommended Supply Voltage	300 V	Series resistor 200 kOhm
Recommended Series Resistor	200 kOhm	Supply voltage 300 V

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode Current Minimum	0.7 mA	—
Cathode Current Maximum	1.2 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 DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1963 Burroughs

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

1963 BURROUGHS

Section 1 · Nixie

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ionization Voltage	170 V	—
Supply Voltage	170 V	—
Peak Cathode Current	2 mA	—
Typical Supply Voltage	170 V	—
Series Resistance	68000 ohm	—
Cathode Current Minimum	0.7 mA	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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196X Burroughs Nixie

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

196X BURROUGHS NIXIE

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	2 mA	Peak
Cathode current	1 mA	Average
Individual cathode dissipation	0.2 W	Maximum
Anode supply voltage	170 V	BasicCircuit test condition
Anode series resistor	68 k0hm	BasicCircuit test condition
Cathode current	0.7–1.2 mA	BasicCircuit test condition
Numeral height	0.305 in	Miniature
Recommended anode series resistor	68 k0hm	Anode supply 170 V
Recommended anode series resistor	150 k0hm	Anode supply 250 V
Recommended anode series resistor	200 k0hm	Anode supply 300 V
Pre-bias voltage	60–75 V	Referenced to on cathode

TUBE TINKER

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