ELECTRONIC TUBE REFERENCE

21BNP4

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
CATHODERAY

Large P4 monochrome television picture tube documented for high-voltage direct-view service, using magnetic deflection and manufacturer-specified focusing and beam-control arrangements for type 21BNP4.

General characteristics

BASE DESIGNATION	12L	**BASE PINS**	6
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	
MAXIMUM PLATE VOLTAGE	18000 V
MAXIMUM SCREEN VOLTAGE	500 V

Published CRT ratings, operating conditions, capacitances, optical and deflection data are retained in parameter rows.

Direct-view cathode-ray picture tube for television display service. Electrical ratings, operating conditions, capacitances, optical data, and construction details were extracted from the supplied datasheet.

SOURCE OPERATING CONDITIONS

1961 Tung Sol

SOURCE PDF

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

1961 TUNG SOL

Section 1 · Cathode Ray

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	**6.3 V**	Nominal
Heater current	**600 mA**	Nominal
Typical anode voltage	**20000 V**	Typical operating conditions
Typical grid 2 voltage	**300 V**	Typical operating conditions

CHARACTERISTIC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Vertical deflection angle	**68 deg**	—
Diagonal deflection angle	**90 deg**	—

CAPACITANCE

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode to all other electrodes	**5 pF**	Approximate

SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1966 Tung Sol Electronic Tubes 4 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 4 OF 4

Section 1 · Cathode Ray

CHARACTERISTICS		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
GRID Al TO ALL OTHER ELECTRODES	**6**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	**1200**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
HEATER	**6.3 V**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
HEATER NE 6ATIVE WITH RESPECT TO CATHODE	**6**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
HEATER	**1 V**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
DC GRID #4 VCITAGE — value 1	**4 V**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
DC GRID #4 VCITAGE — value 2	**5 V**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
DC GRID #4 VCITAGE — value 3	**550 V**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
DC GRID #2 VOLTAGE — value 1	**2 V**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
DC GRID #2 VOLTAGE — value 2	**300 V**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
DC GRID #1 VOLTAGE	**1 V**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
OC GRID #4 CURRENT — value 1	**4**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
OC GRID #4 CURRENT — value 2	**15**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
OC GRID #4 CURRENT — value 3	**25**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
MAXIMUM EXTERNAL CONDUCTIVE COATING TO ANODE	**1500 mA**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
MAXIMUM DC GRID — value 1	**4 V**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
MAXIMUM DC GRID — value 2	**5 V**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
MAXIMUM DC GRID — value 3	**1000 V**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
MAXIMUM DC GRID #2 VOLTAGE	**2 V**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
MAXIMUM GRID #1 VOLTAGE	**1 V**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
MAXIMUM GRID — value 1	**1 mA**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.
MAXIMUM GRID — value 2	**1.5 mA**	Published CRT datasheet value; multiple values on a row correspond to separate source-table conditions or limits.

SOURCE OPERATING CONDITIONS

SOURCE PDF

1968 General Electric Co

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

1968 GENERAL ELECTRIC CO

Section 1 · Cathode Ray

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Typical Anode Voltage	**16000 V**	—
Typical Grid No. 2 Voltage	**300 V**	—
Grid No. 1 Maximum Negative Bias	**125 V**	—
Grid No. 1 Maximum Positive Peak	**2 V**	—

Tube Tinker

An independent reference for electronic tubes, vacuum tubes, and their source documents.

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