



ELECTRONIC TUBE REFERENCE

24BP4

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

CATHODERAY

Twenty-four-inch direct-view monochrome television picture tube with a P4 screen and magnetic deflection. Manufacturer documentation provides the high-voltage operating, focusing, optical, and capacitance characteristics required for receiver display service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	12M	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

SECTION 1 Cathode Ray	
MAXIMUM SCREEN VOLTAGE	500 V
<i>CRT electrode, focus, deflection and optical data preserved in parameter rows.</i>	

Direct-view cathode-ray picture tube intended for television display service. The supplied Tung-Sol datasheet provides electrical ratings, operating conditions, capacitances, optical characteristics, focusing and deflection information.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1961 Tung Sol

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
Maximum Anode Voltage	16000 V	—
Typical Anode Voltage	12000 V	—
Maximum Grid2 Voltage	500 V	—
Typical Grid2 Voltage	300 V	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
FocusingMethod	Electrostatic	—
DeflectingMethod	Magnetic	—
DiagonalDeflectionAngleApproximate	70 degree	—
PhosphorNumber	4	—
FluorescentColor	White	—



SOURCE OPERATING CONDITIONS

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1966 Tung Sol Electronic Tubes 4 of 4

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
D IRE'CT INTERELEC TR ODE CAPACITANCES (APPROX.) – value 1	1	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
D IRE'CT INTERELEC TR ODE CAPACITANCES (APPROX.) – value 2	1	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
D IRE'CT INTERELEC TR ODE CAPACITANCES (APPROX.) – value 3	0	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
GRID ;N1 TO ALL OTHER ELECTRODES – value 1	0	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
GRID ;N1 TO ALL OTHER ELECTRODES – value 2	6	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
PHOSPHOR NUMBER	4	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.) – value 1	11 percent	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
FACEPLATE LIGHT TRANSMISSION AT CENTER (APPROX.) – value 2	62 percent	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
HEATER VOL TA 6E – value 1	6 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
HEATER VOL TA 6E – value 2	3 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
HEATER CURRENT	600 mA	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
(FOCUSING ELECTRODE) – value 1	64 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
(FOCUSING ELECTRODE) – value 2	350 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HEATER POSITIVE WITH RESPECT TO CATHODE – value 1	1 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
HEATER POSITIVE WITH RESPECT TO CATHODE – value 2	0 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
AFOLUS ELECTRODE MAY BE MODULATED TO IMPROVE OVERALL FOCUS. – value 1	1	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
AFOLUS ELECTRODE MAY BE MODULATED TO IMPROVE OVERALL FOCUS. – value 2	0	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC GRID #3, GRID #5, COLLECTOR VOLTAGE – value 1	3 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC GRID #3, GRID #5, COLLECTOR VOLTAGE – value 2	5 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC GRID #3, GRID #5, COLLECTOR VOLTAGE – value 3	12000 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC GRID #4 VOLTAGE RANGE R – value 1	4 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC GRID #4 VOLTAGE RANGE R – value 2	-4 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC GRID #4 VOLTAGE RANGE R – value 3	260 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC GRID #4 CURRENT – value 1	4	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC GRID #4 CURRENT – value 2	15	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC GRID #4 CURRENT – value 3	11	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC GRID #2 VOLTAGE – value 1	2 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC GRID #2 VOLTAGE – value 2	300 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC GRID #1 VOLTAGE C – value 1	1 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC GRID #1 VOLTAGE C – value 2	33 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
DC GRID #1 VOLTAGE C – value 3	-77 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
CVISUAL EXTINCTION OF UNDEFLECTED FOCUSED SPOT.	0	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
MAXIMUM DC GRID #3, GRID #5, COLLECTOR VOLTAGE – value 1	3 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
MAXIMUM DC GRID #3, GRID #5, COLLECTOR VOLTAGE – value 2	5 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
MAXIMUM DC GRID #3, GRID #5, COLLECTOR VOLTAGE – value 3	16000 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
MAXIMUM DC GRID #4 VOLTAGE RANGE	4 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
MAXIMUM DC GRID #4 VOLTAGE A – value 1	4 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
MAXIMUM DC GRID #4 VOLTAGE A – value 2	1000 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
MAXIMUM DC GRID #2 VOLTAGE – value 1	2 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
MAXIMUM DC GRID #2 VOLTAGE – value 2	500 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
MAXIMUM GRID #1 VOLTAGE	1 V	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.
MAXIMUM GRID #1 CIRCUIT RESISTANCE	1	Published CRT datasheet value; multiple values on one source row represent separate conditions, limits, or nominal values.

TUBE TINKER

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