



ELECTRONIC TUBE REFERENCE

12DT6

Voltage Pentode - Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Seven-pin miniature sharp-cutoff pentode with manufacturer-published ratings, characteristics, and application information. Its abrupt transfer characteristic identifies it as a fixed-gain signal amplifier rather than a remote-cutoff AGC tube.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	7
NOMINAL HEATER	12.6 V / 150 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	150000 Ω
TRANSCONDUCTANCE	0.0008 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	1.7 W
MAXIMUM SCREEN DISSIPATION	1.1 W
<i>Promoted from published ratings/characteristics tables; additional operating points and capacitances retained in TUBE_SECTION_PARAMETER.</i>	

12DT6 is A SHARP CUTOFF PENTODE IN THE 7 PIN MINIATURE CONSTRUCTION. Electrical ratings, characteristics, and application information are taken from the supplied datasheet.



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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Service	FM detector / mixer / gain-controlled amplifier	—
Heater Warmup Time	11 s	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1966 Tung Sol Electronic Tubes 2 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HEATER V0 L.TAGE	12 V	HEATER VO L.TAGE 12.E VOLTS
FOR GRID #	2 V	FOR GRID #2 VOLTAGES UP TO 165 VOLTS 1.] WATTS
FOR GRID #	2 V	FOR GRID #2 VOLTAGES BETWEEN 165 AND 330 VOLTS SEE RATING CHART
HEATER WARP	1 s	HEATER WARP.1—UP TIME (APPROX.) # LL SECONDS
HEATER WARM-UP TIME IS DEFINED AS THE TI ME'REQUI RED FOR THE VOLTAGE ACR 05	5 V	HEATER WARM-UP TIME IS DEFINED AS THE TI ME'REQUI RED FOR THE VOLTAGE ACR 055 THE NEATER TO REACX
HEATER VOLTAGE	12 V	HEATER VOLTAGE 12.E VOLTS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HEATER CURRENT	150 mA	HEATER CURRENT 0,15 AMP.
PLATE SUPPLY VOLTAGE	150 V	PLATE SUPPLY VOLTAGE 150 VOLTS
GRID #	2 V	GRID #2 SUPPLY VOLTAGE 100 VOLTS
PLATE RESISTANCE (APPROX.)	0.15 MΩ	PLATE RESISTANCE (APPROX.) 0.15 MEGOHM
GRID #	1 V	GRID #1 VOLTAGE (APPROX.) FOR PLATE CURRENT OF 1p μAMP —4.5 voLrs
GRID #	3 V	GRID #3 VOLTAGE (APPROX.) FOR PLATE CURRENT OF 10 μAMP —3.5 voL Ts
PLATE CURRENT	1.1 mA	PLATE CURRENT 1.1 MA.
GRID #	2 mA	GRID #2 CURRENT 2.1 MA.
PLATE SUPPLY VOLTAGE	25 V	PLATE SUPPLY VOLTAGE 25O 25O 25O VOLTS
GRID #	2 V	GRID #2 SUPPLY VOLTAGE ZOO 100 LOO VOLTS
CATHODE	81 Ω	CATHODE-81AS RESISTOR 560 560 560 OHMS
PLATE CURRENT	0.23 mA	PLATE CURRENT 0.23 0,22 0,21 MA.
GRID #	2 mA	GRID #2 CURRENT 3,4 5.5 6 MA.
GRID #	1 mA	GRID #1 CURRENT 0.013 0.6 0.8 MA.
AU01	0 V	AUO10 OUTPUT VOLTAGE (RNS, APP-R OX.):
GRID #	2 V	GRID #2 VOLTAGE EXPRESSED AS a OF
GRID #I (Ici)OR GRID #	2 A	GRID #I (Ici)OR GRID #2 (Icp) MILLIAMPERES
GRID #	2 A	GRID #2 MILLIAMPERES
PLATE (Ib) OR GRID #	2 A	PLATE (Ib) OR GRID #2 (Icz) MILLIAMPERES
GRID #	3 V	GRID #3 VOLTS

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
MAXIMUM PLATE VOLTAGE	330 V	MAXIMUM PLATE VOLTAGE 330 votTs
MAXIMUM GRID #	3 V	MAXIMUM GRID #3 (SUPPRESSOR) VOLTAGE '28 VOLTS
MAXIMUM GRID #	2 V	MAXIMUM GRID #2 SUPPLY VOLTAGE 330 voLTs
MAXIMUM GkID #	2 V	MAXIMUM GkID #2 (SCREEN) VOLTAGE SEE RATING CHART
MAXIMUM PLATE DISSIPATION	1.7 mA	MAXIMUM PLATE DISSIPATION 1.7 WATTS
MAXIMUM GRID #	2 mA	MAXIMUM GRID #2 INPUT:

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
CATHODE-BIAS RESISTOR	560 Ω	CATHODE-BIAS RESISTOR 560 Ω s
PLATE LOAD RESISTOR	0.27 MΩ	PLATE LOAD RESISTOR 0.27 0.27 0.27 MEGOHM
FOR FIXED-BIAS OPERATION	0.25 MΩ	FOR FIXED-BIAS OPERATION 0.25 MEGOHM
FOR CATHODE-BIAS OPERATION 0	5 MΩ	FOR CATHODE-BIAS OPERATION 0.5 MEGOHM
RATIO OF THE AUDIO OUTPUT VOLTAGE PRODUCED BY 10-PERCENT AMPLITUDE MODULATION OF THE	4 V	RATIO OF THE AUDIO OUTPUT VOLTAGE PRODUCED BY 10-PERCENT AMPLITUDE MODULATION OF THE 4. 5-NC
MAXIMUM GRID #	2 V	— MAXIMUM GRID #2 SUPPLY VOLTAGE RATING