

ELECTRONIC TUBE REFERENCE

4DT6

Voltage Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Dual-control sharp-cutoff pentode for FM detection, delay, gain-control, and mixer service in television receivers. Its independently effective control grids enable specialized television sound-detector and signal-processing functions.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	7
NOMINAL HEATER	4.2 V / 450 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	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	1.5 W
MAXIMUM SCREEN DISSIPATION	1 W
Grid-1 transconductance promoted; grid-3 transconductance retained as parameter.	

Sharp-cutoff pentode for FM detector, delay, gain-control and mixer service in television receivers.



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 / delay / gain-controlled amplifier / mixer	—



SOURCE OPERATING CONDITIONS

1965 Sylvania Electronic Tubes Vol3

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

1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 1 · Pentode

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	150 V	ClassA
Screen-grid voltage	100 V	ClassA
Grid 3 voltage	0 V	ClassA
Cathode bias resistor	560 Ohm	ClassA
Plate current	1.7 mA	ClassA
Screen-grid current	2.1 mA	ClassA

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	150000 Ohm	ClassA
Grid 1 transconductance	800 uS	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid 3 transconductance	515 μ S	ClassA
Grid 1 cutoff voltage	-4.5 V	—
Grid 3 cutoff voltage	-3.5 V	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid 1 to plate capacitance	0.02 pF	Shielded
Grid 3 to plate capacitance	1.4 pF	Shielded
Grid 1 input capacitance	5.8 pF	Shielded


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1965 Westinghouse Data Book

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

1965 WESTINGHOUSE DATA BOOK

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	4.2 V	—
Heater Current	450 mA	—
Plate Resistance	150000 ohm	RepresentativePublishedPoint

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	300 V	—
Maximum Plate Dissipation	1.5 W	—


SOURCE DATA APPENDIX

1966 Tung Sol Electronic Tubes 1 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4
Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID #	0.02 pF	GRID #1 TO PLATE 0.02 uuf
GRID #	0.1 MMF	GRID #1 TO GRID #~ 0.1 µpf
AND INTERNAL SHIELD AND CATHODE	5.8 MMF	AND INTERNAL SHIELD AND CATHODE 5.8 µpf

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HEATER VOLTAGE	4.2 V	Maximum Ratings HEATER VOLTAGE 4.2 VOLTS
FOR GRID #	65 V	Maximum Ratings FOR GRID #2 VOLTAGES UP TO X65 VOLTS 1.1 ~ WATTS
FOR GRID #	330 V	Maximum Ratings FOR GRID #2 VOLTAGES BETWEEN 165 AND 330 VOLTS SEE JS—C4-2 ~
HEATER VOLTAGE	4.2 V	Typical Operating Conditions HEATER VOLTAGE 4.2 VOLTS
PLATE SUPPLY VOLTAGE	150 V	Typical Operating Conditions PLATE SUPPLY VOLTAGE 150 VOLTS
CATHODE-BIAS RESISTOR	560 ohm	Typical Operating Conditions CATHODE-BIAS RESISTOR 560 OHMS
PLATE RESISTANCE (APPROX.)	0.15 Mohm	Typical Operating Conditions PLATE RESISTANCE (APPROX.) 0.15 MEGOHM
GRID #	515 MMHOS	Typical Operating Conditions GRID #3 TO PLATE 515 µMHOS
GRID #	4.5 V	Typical Operating Conditions GRID #1 VOLTAGE (APPROX.) FOR PLATE CURRENT OF 10 µAMP —4.5 VOLTS
GRID #	3.5 V	Typical Operating Conditions GRID #3 VOLTAGE (APPROX.) FOR PLATE CURRENT OF 10I/.AMP —3.5 voLTs
PLATE CURRENT	1.1 mA	Typical Operating Conditions PLATE CURRENT 1.1 MA.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID #~ CURRENT	2.1 mA	Typical Operating Conditions GRID #~ CURRENT 2.1 MA.
PLATE SUPPLY VOLTAGE	250 V	Typical Operating Conditions PLATE SUPPLY VOLTAGE 250 250 250 VOLTS
CATHODE-BIAS RESISTOR	560 ohm	Typical Operating Conditions CATHODE-BIAS RESISTOR 560 560 560 OHMS
PLATE LOAD RESISTOR	0.27 Mohm	Typical Operating Conditions PLATE LOAD RESISTOR 0.27 0.27 0.27 MEGOHM
PLATE CURRENT	0.21 mA	Typical Operating Conditions PLATE CURRENT 0.23 0.22 0.21 MA.
GRID #	6 mA	Typical Operating Conditions GRID #2 CURRENT 3.4 5.5 6 MA.
FOR FIXED-BIAS OPERATION	0.25 Mohm	Typical Operating Conditions FOR FIXED-BIAS OPERATION 0.25 MEGOHM
FOR CATHODE-BIAS OPERATION	0.5 Mohm	Typical Operating Conditions FOR CATHODE-BIAS OPERATION 0.5 MEGOHM



SOURCE OPERATING CONDITIONS

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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	4.2 V	—
Heater Current	450 mA	—