

ELECTRONIC TUBE REFERENCE

6DT6

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Dual-control sharp-cutoff pentode developed primarily for television FM detection. Two effective control grids also permit delay, gain-control, and mixer circuits, providing specialized signal-processing flexibility.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7EN	BASE PINS	7
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7EN - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – G1	A	G1 – Control Grid	CONNECTED
PIN2 – IS	A	IS – Internal Screen	CONNECTED
PIN2 – K	A	K – Cathode	CONNECTED
PIN3 – H	–	H – Heater	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – P	A	P – Plate (Anode)	CONNECTED
PIN6 – G2	A	G2 – Screen Grid	CONNECTED
PIN7 – G3	A	G3 – Suppressor Grid	CONNECTED

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
<i>Grid-1 transconductance promoted; grid-3 transconductance retained as parameter.</i>	

The 6DT6 is a sharp-cutoff pentode intended for television FM detector service; its two control grids also permit delay, gain-control, and mixer circuits.

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 0hm	ClassA
Plate current	1.7 mA	ClassA
Screen-grid current	2.1 mA	ClassA

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	150000 0hm	ClassA
Grid 1 transconductance	800 uS	ClassA
Grid 3 transconductance	515 uS	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

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid2 supply voltage maximum	300 V	—
Grid2 dissipation maximum	1 W	—
Class-A grid2 voltage	100 V	ClassA

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	150000 ohm	ClassA
Grid3 cutoff bias	-3.5 V	—

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Limiter / FM detector / gating / mixer	—



SOURCE DATA APPENDIX

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

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid 1 to plate capacitance	0.02 pF	—
Grid 1 to grid 3 capacitance	0.1 pF	—
Grid 3 to plate capacitance	1.4 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	150 V	ClassA1
Screen supply voltage	100 V	ClassA1
Plate current	1.1 mA	ClassA1
Screen current	2.1 mA	ClassA1
Grid 3 transconductance	515 uS	ClassA1



SOURCE DATA APPENDIX

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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	—
HeaterCurrentNominal	300 mA	—
Typical Plate Voltage	150 V	ClassA
Typical Screen Voltage	100 V	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	150000 Ohm	—
Transconductance	800 uS	—
Grid3 Transconductance	515 uS	Grid3Control

TUBE TINKER

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