

ELECTRONIC TUBE REFERENCE

6DC6

Voltage Pentode - Remote Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Semi-remote-cutoff miniature pentode for gain-controlled color-television picture-IF amplification and RF amplifier service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7CM	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

7CM - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – G1	A	G1 – Control Grid	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
PIN7 – IS	A	IS – Internal Screen	CONNECTED

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	500000 Ω
TRANSCONDUCTANCE	0.0055 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	150 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM SCREEN DISSIPATION	0.5 W
<i>Published promoted values applied where applicable; additional ratings and operating data retained as parameters.</i>	

The 6DC6 is a 7-pin miniature semi-remote-cutoff pentode intended for gain-controlled picture IF stages in color television and also for RF amplifier use.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 Sylvania

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

1950 SYLVANIA

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Screen Supply Voltage	300 V	Grid No. 2 supply
Plate Current	9 mA	200 V plate, 150 V screen
Screen Current	3 mA	200 V plate, 150 V screen

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-Plate Capacitance	0.02 pF	Maximum



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

195X General Electric Essential Characteristics

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

195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	200 V	ClassA
Screen voltage	150 V	ClassA
Cathode resistor	180 ohm	ClassA
Plate current	9 mA	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen current	3 mA	ClassA
Plate resistance	500000 ohm	ClassA
Transconductance	5500 uS	ClassA

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	6.5 pF	—
Output capacitance	2 pF	—
Grid-to-plate capacitance	0.02 pF	—


SOURCE DATA APPENDIX

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
Plate Voltage	200 V	Published operating/characteristic table
Screen Voltage	150 V	Published operating/characteristic table

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	9 mA	Published operating/characteristic table
Screen Current	3 mA	Published operating/characteristic table
Transconductance	5500 uS	Published operating/characteristic table
Plate Resistance	0.5 ohm	Published operating/characteristic table


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	—
Input capacitance	6.5 pF	—
Output capacitance	2 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	200 V	ClassA1
Screen voltage	150 V	ClassA1
Plate current	9 mA	ClassA1
Screen current	3 mA	ClassA1



SOURCE DATA APPENDIX

1971 RCA HB3 Binder 4 of 7

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

1971 RCA HB3 BINDER 4 OF 7
Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage	6.3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Current	300 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 1 -Grid No.1 – published value 1	1	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 1 -Grid No.1 – published value 2	5	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 2 -Cathode – published value 1	2	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 2 -Cathode – published value 2	6	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 3 –Heater – published value 1	3	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 3 –Heater – published value 2	7	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 4 -Heater	4	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Supply Voltage	200 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
~'1 Grid-No.2 Voltage	1 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Cathode-Bias Resistor	180 ohm	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Resistance (Approx.)	5 Mohm	Published datasheet value; multiple values represent separate source-table limits or conditions.
Transconductance	5500	Published datasheet value; multiple values represent separate source-table limits or conditions.
transconductance of 50 μ mhos – published value 1	50 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
transconductance of 50 μ mhos – published value 2	12.5 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	9 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid-No.2 Current	3 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-N~2 VOLTS=150 – published value 1	2 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-N~2 VOLTS=150 – published value 2	150 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE VOLTS=200	200 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
E~2=GRID-NS2 VOLTS	2 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
_ Ep=6.3 VOLTS – published value 1	6.3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
_ Ep=6.3 VOLTS – published value 2	200 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID -N"3 VOLTS=0	3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
E~2=GRID-NY2 VOLTS	2 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Ef=8.3 VOLTS – published value 1	8.3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Ef=8.3 VOLTS – published value 2	200 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
E~2=GRID'-N4 2 VOLTS – published value 1	2 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
E~2=GRID'-N4 2 VOLTS – published value 2	2 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
E _{~2} =GRID-NQ2-SUPPLY VOLTS	2 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to plate	0.02 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE VOLTAGE	300 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-No.3 (SUPPRESSOR) VOLTAGE	0 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-No.2 SUPPLY VOLTAGE	300 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Positive bias value	0 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE DISSIPATION	2 W	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-No.2 INPUT	5 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater negative with respect to cathode	200 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater positive with respect to cathode	200 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
For fixed-bias operation	0.25 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
For cathode=bias operation	1 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.



SOURCE DATA APPENDIX

1975 RCA RC30

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

1975 RCA RC30
Section 1 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1-to-plate capacitance	0.02 pF	—
Grid No.1-to-other-electrodes capacitance	6.5 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	200 V	ClassA
Screen-grid supply voltage	150 V	ClassA
Cathode-bias resistor	180 ohm	ClassA
Plate current	9 mA	ClassA
Screen-grid current	3 mA	ClassA