

ELECTRONIC TUBE REFERENCE

6CU8

Voltage Pentode - Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Medium-mu triode plus sharp-cutoff pentode for a wide range of black-and-white and color television circuits, with controlled heater warm-up.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9DX	BASE PINS	9
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

9DX - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – 2K	B	K – Cathode	CONNECTED
PIN2 – 2G1	B	G1 – Control Grid	CONNECTED
PIN3 – 2P	B	P – Plate (Anode)	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – H	–	H – Heater	CONNECTED
PIN6 – 1G3	A	G3 – Suppressor Grid	CONNECTED
PIN6 – IS	A	IS – Internal Screen	CONNECTED
PIN6 – 1K	A	K – Cathode	CONNECTED
PIN7 – 1G1	A	G1 – Control Grid	CONNECTED
PIN8 – 1G2	A	G2 – Screen Grid	CONNECTED
PIN9 – 1P	A	P – Plate (Anode)	CONNECTED

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	4100 Ω
TRANSCONDUCTANCE	0.0058 S
AMPLIFICATION FACTOR	28
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	2.8 W
<i>Published promoted fields populated from printed headings.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	170000 Ω
TRANSCONDUCTANCE	0.0078 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	2.3 W
MAXIMUM SCREEN DISSIPATION	0.55 W
<i>Published promoted fields populated from printed headings.</i>	

The 6CU8 combines a medium-mu triode with a sharp-cutoff pentode and is intended for a wide range of black-and-white and color television applications. Its controlled heater warm-up supports series-string television receiver use.



SOURCE OPERATING CONDITIONS

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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 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
TriodeTransconductance	5800 μ S	Section1

1961 TUNG SOL

Section 2 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PentodeTransconductance	7800 μ S	Section2



SOURCE OPERATING CONDITIONS

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1966 Tung Sol Electronic Tubes 2 of 4

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1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	125 V	ClassA
Grid-1 voltage	-1 V	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	17 mA	ClassA

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	125 V	ClassA
Grid-2 voltage	125 V	ClassA
Cathode-bias resistor	56 ohm	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	12 mA	ClassA
Grid-2 current	3.8 mA	ClassA



SOURCE OPERATING CONDITIONS

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1971 RCA HB3 Binder 4 of 7

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1971 RCA HB3 BINDER 4 OF 7

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC)	6.3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Current – published value 1	0 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Current – published value 2	45 A	Published datasheet value; multiple values represent separate source-table limits or conditions.
Current – published value 3	6 A	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid to plate	1.6	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
8 internal shield, and heater – published value 1	8	Published datasheet value; multiple values represent separate source-table limits or conditions.
8 internal shield, and heater – published value 2	1.9	Published datasheet value; multiple values represent separate source-table limits or conditions.
& internal shield, and heater	1.6	Published datasheet value; multiple values represent separate source-table limits or conditions.
grid No.2, and heater	7	Published datasheet value; multiple values represent separate source-table limits or conditions.
grid No.2, and heater	2.4	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Supply Voltage – published value 1	125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Supply Voltage – published value 2	125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid-No.2 Supply Voltage	125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid-No.1 Voltage – published value 1	-1 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid-No.1 Voltage – published value 2	0 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Cathode Resistor – published value 1	0 ohm	Published datasheet value; multiple values represent separate source-table limits or conditions.
Cathode Resistor – published value 2	56 ohm	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Resistance (Approx) – published value 1	4100 ohm	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Resistance (Approx) – published value 2	170000 ohm	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance – published value 1	5800	Published datasheet value; multiple values represent separate source-table limits or conditions.
Transconductance – published value 2	7800	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Current – published value 1	17 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Current – published value 2	12 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid-No.2 Current	3.8 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
plate μ a = 20 – published value 1	20 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
plate μ a = 20 – published value 2	-12 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
plate μ a = 20 – published value 3	-6 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
plate ma. = 1.6, and cathode	1.6 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 1 -Triode – published value 1	1	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 1 -Triode – published value 2	4	Published datasheet value; multiple values represent separate source-table limits or conditions.
Cathode,	5	Published datasheet value; multiple values represent separate source-table limits or conditions.
between 165 and 330 volts – published value 1	165 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
between 165 and 330 volts – published value 2	330 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PLATE VOLTS=125	125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-N42 VOLTS=125 ██████████ – published value 1	125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-N42 VOLTS=125 ██████████ – published value 2	1 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-N42 VOLTS=125 ██████████ – published value 3	1 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-Nsp VOLTS=125	125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to plate	0.025 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE VOLTAGE – published value 1	330 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE VOLTAGE – published value 2	330 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
SUPPLY VOLTAGE	330 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Positive-bias value – published value 1	0 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Positive-bias value – published value 2	0 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE DISSIPATION – published value 1	2.8 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE DISSIPATION – published value 2	2.3 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
respect to cathode – published value 1	200 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
respect to cathode – published value 2	200 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

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Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pentode grid No.1 to triode plate	0.03 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pentode plate to triode plate – published value 1	0 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pentode plate to triode plate – published value 2	7 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.