

ELECTRONIC TUBE REFERENCE

6AC7

Voltage - Pentode Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

High-transconductance sharp-cutoff pentode designed for wide-band voltage amplification. Its substantial transconductance and fixed-control characteristic suit broadband RF, IF, and video-frequency signal stages.

GENERAL CHARACTERISTICS

BASE DESIGNATION	8N	BASE PINS	8
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

8N - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	1000000 Ω
TRANSCONDUCTANCE	0.009 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	150 V
MAXIMUM PLATE DISSIPATION	3 W
MAXIMUM SCREEN DISSIPATION	0.38 W
MAXIMUM CATHODE CURRENT	25 mA
MAXIMUM HEATER-CATHODE VOLTAGE	90 V
<i>Published promoted fields populated from the datasheet; identical repeated sections compressed where applicable.</i>	

High-transconductance sharp-cutoff pentode for wide-band voltage amplification.



SOURCE OPERATING CONDITIONS

1950 Sylvania

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

1950 SYLVANIA

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	750000 ohm	—
Transconductance	9000 μ S	—
Amplification Factor	6750	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	300 V	—
Maximum Screen Voltage	300 V	—
Typical Plate Current	10 mA	—
Typical Screen Current	2.5 mA	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1953 RFT Rundfunk Technik

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

1953 RFT RUNDFUNK TECHNIK

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	450 mA	Nominal
Maximum Plate Voltage	330 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Screen Voltage	165 V	—
Maximum Plate Dissipation	3.3 W	—
Maximum Screen Dissipation	0.45 W	—
Maximum Cathode Current	40 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	9000 μ S	Typical
Plate Resistance	750000 ohm	Typical


SOURCE DATA APPENDIX

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
Maximum plate voltage	300 V	Published handbook rating
Maximum screen voltage	150 V	Published handbook rating
Plate voltage	300 V	ClassA
Screen voltage	150 V	ClassA
Control-grid bias	0 V	ClassA
Plate current	10 mA	ClassA
Screen current	2.5 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	1000000 ohm	Published handbook characteristic
Transconductance	9000 μ S	Published handbook characteristic

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	6.3 V	Published heater/filament rating
Heater/filament current	450 mA	Published heater/filament rating


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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	9000 μ S	Typical

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	300 V	ClassA;Condition1
Screen supply voltage	150 V	ClassA;Condition1
Cathode resistor minimum	100 Ω	ClassA;Condition1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	10 mA	ClassA;Condition1
Screen current	1.5 mA	ClassA;Condition1
Plate voltage	300 V	ClassA;Condition2
Screen supply voltage	300 V	ClassA;Condition2
Screen series resistor	60000 Ω	ClassA;Condition2
Cathode resistor minimum	160 Ω	ClassA;Condition2
Application	High-transconductance sharp-cutoff voltage amplifier	Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	1 M Ω	Section1
Transconductance	9000 μ S	Section1



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
HeaterOrFilamentVoltageNominal	6.3 V	—
HeaterOrFilamentCurrentNominal	450 mA	—
Maximum Plate Voltage	300 V	—
Maximum Screen Voltage	150 V	—
Maximum Plate Dissipation	3 W	—
Maximum Screen Dissipation	0.38 W	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	1000000 Ohm	—
Transconductance	9000 uS	—

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes, and their source documents.

[Catalog](#) [Tube types](#) [Full books](#) [Blog](#) [Feedback & corrections](#)

© 2026 Tube Tinker