



ELECTRONIC TUBE REFERENCE

6AG7

Power - Pentode Single (NOT beam) (under 10W) electronic tube

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
PENTODE

High-transconductance pentode for television video output, cathode-follower, and other wideband power-amplifier applications.

GENERAL CHARACTERISTICS

BASE DESIGNATION	B8-21	BASE PINS	8
NOMINAL HEATER	6.3 V / 650 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	130000 Ω
TRANSCONDUCTANCE	0.011 S
AMPLIFICATION FACTOR	770
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	9 W
MAXIMUM SCREEN DISSIPATION	1.5 W
MAXIMUM CATHODE CURRENT	40 mA
<i>High-transconductance broadband-amplifier pentode.</i>	

Power pentode used in video-amplifier output stages of color and black-and-white television receivers.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1940 RCA

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

1940 RCA

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	650 mA	Nominal
Maximum Plate Voltage	300 V	—
Maximum Screen Voltage	300 V	—
Maximum Plate Dissipation	8.7 W	—
Maximum Cathode Current	40 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	7700 μ S	Typical
Amplification Factor	770	Typical
Plate Resistance	100000 ohm	Typical
VideoVoltageOutputPeakToPeak	70 V	4 MHz bandwidth amplifier

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	650 mA	Nominal
Maximum Plate Voltage	330 V	—
Maximum Screen Voltage	330 V	—
Maximum Plate Dissipation	9 W	—
Maximum Screen Dissipation	1.5 W	—
Maximum Cathode Current	125 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	11000 μ S	Typical
Plate Resistance	90000 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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	300 V	ClassA
Screen-grid voltage	150 V	ClassA
Grid voltage	-3 V	ClassA
Plate current	30 mA	ClassA
Screen-grid current	7 mA	ClassA
Load resistance	10000 ohm	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power output	3 W	ClassA


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	300 V	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
TransconductancePublished	11000 μ S	ClassA


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

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance maximum	0.06 pF	Section1
Input capacitance	13 pF	Section1
Output capacitance	7.5 pF	Section1
Grid-1 to grid-2 capacitance	5.2 pF	Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater-to-cathode capacitance	10.7 pF	Section1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Video output amplifier or cathode-follower service	Section1
Maximum heater-cathode voltage	90 V	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	650 mA	—
Maximum Plate Voltage	300 V	—
Maximum Screen Voltage	300 V	—
Maximum Plate Dissipation	9 W	—
Maximum Screen Dissipation	1.5 W	—
Typical Plate Voltage	300 V	ClassA
Typical Screen Voltage	150 V	ClassA
Zero Signal Plate Current	30 mA	ClassA
Maximum Signal Power Output	3 W	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	130000 Ohm	—
Transconductance	11000 uS	—

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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	0.06 pF	Capacitance
and Internal Shield	13 pF	Capacitance
and Internal Shield	7.5 pF	Capacitance

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	300 V	MaximumRatings
Grid-No.2 Voltage	300 V	MaximumRatings
Grid-No.1 Voltage,	0 V	MaximumRatings
Plate Dissipation	9 W	MaximumRatings
Grid-No.2 Input	1.6 W	MaximumRatings
For fixed-bias operation	0.26 megohm	MaximumCircuitValues
For cathode-bias operation	1 megohm	MaximumCircuitValues

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	300 V	Characteristics
Grid-No.2 (Screen-Grid) Voltage	160 V	Characteristics
Zero-Signal Grid-No.2 Current	30 mA	Characteristics
Maximum-Signal Grid-No.2 Current	30.6 mA	Characteristics
Zero-Signal Grid-No.2 Current	7 mA	Characteristics

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum-Signal Grid-No.2 Current	9 mA	Characteristics
Plate Resistance	0.13 megohm	Characteristics
Load Resistance	10000 ohm	Characteristics

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