

ELECTRONIC TUBE REFERENCE

6AN8

Voltage Triode Pentode electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Combined triode-pentode for television video, IF, AGC, sync, burst, band-pass, or related signal-processing stages.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9DA	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

9DA - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	4700 Ω
TRANSCONDUCTANCE	0.0045 S
AMPLIFICATION FACTOR	21
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	1 W
<i>Triode section.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	170000 Ω
TRANSCONDUCTANCE	0.0078 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	3.5 W
MAXIMUM SCREEN DISSIPATION	0.5 W
<i>Pentode section.</i>	

Medium-mu triode plus sharp-cutoff pentode for general television applications including IF amplification, reactance service, oscillation, sync processing, and phase splitting.



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 · Triode

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Primary application	Low-frequency oscillator	—

1950 SYLVANIA

Section 2 · Pentode

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Primary application	Video amplifier	—



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 2 · 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	200 V	ClassA
Screen voltage	150 V	ClassA
Plate current	9.5 mA	ClassA
Screen current	2.8 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	300000 ohm	Published handbook characteristic
Transconductance	6200 μ S	Published handbook characteristic
Heater voltage	6.3 V	Published heater rating
Heater current	450 mA	Published heater rating



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	6.3 V	—
HeaterOrFilamentCurrent	450 mA	—
Transconductance	5700 μ S	—
Amplification Factor	21	—
Grid To Plate Capacitance	2 pF	—
Input Capacitance	3 pF	—
Output Capacitance	2 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	150 V	TriodeUnit
Plate Current	10 mA	TriodeUnit

1965 WESTINGHOUSE DATA BOOK

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	150 V	PentodeUnit
Screen Voltage	150 V	PentodeUnit
Plate Current	10 mA	PentodeUnit

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen Current	3.5 mA	PentodeUnit

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	7000 uS	—
GridToPlateCapacitanceMaximum	0.015 pF	—
Input Capacitance	5 pF	—
Output Capacitance	3.5 pF	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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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 · Triode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	1.5 pF	TriodeSection
Input capacitance	2 pF	TriodeSection
Output capacitance	0.26 pF	TriodeSection

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	150 V	ClassA;TriodeSection
Grid voltage	-3 V	ClassA;TriodeSection
Plate current	15 mA	ClassA;TriodeSection
Application	Low-frequency oscillator, sync clipper/separator, phase splitter	
	Section1	

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor	21	TriodeSection
Transconductance	4500 μS	TriodeSection

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	4700 Ω	TriodeSection

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 2 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance maximum	0.04 pF	PentodeSection
Input capacitance	7 pF	PentodeSection
Output capacitance	2.4 pF	PentodeSection

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	125 V	ClassA;PentodeSection
Screen supply voltage	125 V	ClassA;PentodeSection
Cathode-bias resistor	56 Ω	ClassA;PentodeSection
Plate current	12 mA	ClassA;PentodeSection
Screen current	3.8 mA	ClassA;PentodeSection
Application	IF amplifier or reactance-tube service	Section2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	7800 μS	PentodeSection
Plate resistance	170000 Ω	PentodeSection