

ELECTRONIC TUBE REFERENCE

6AT8

Voltage Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Combined triode-pentode used as an oscillator and mixer or frequency converter in television or VHF communications receivers.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9DW	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

9DW - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – 2G1	B	G1 – Control Grid	CONNECTED
PIN2 – 2P	B	P – Plate (Anode)	CONNECTED
PIN3 – K	A	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 – 1G3	A	G3 – Suppressor Grid	CONNECTED
PIN9 – 1G1	A	G1 – Control Grid	CONNECTED

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	6900 Ω
TRANSCONDUCTANCE	0.0058 S
AMPLIFICATION FACTOR	40
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	2 W
<i>Promoted from the printed maximum-rating/characteristic columns; operating points retained as section parameters.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	750000 Ω
TRANSCONDUCTANCE	0.0046 S
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	2.4 W
MAXIMUM SCREEN DISSIPATION	0.65 W
<i>Promoted from the printed maximum-rating/characteristic columns; operating points retained as section parameters.</i>	

Triode-pentode for television frequency-converter, IF, oscillator, and related service.



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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Conversion transconductance	2100 μS	MixerService

1950 SYLVANIA

Section 2 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Conversion transconductance	2800 μS	MixerService



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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	Pentode ClassA
Screen voltage	150 V	Pentode ClassA
Plate current	7.7 mA	Pentode ClassA
Screen current	1.6 mA	Pentode ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	100 V	Triode ClassA
Plate current	8.5 mA	Triode ClassA

195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	Pentode ClassA
Screen voltage	150 V	Pentode ClassA
Plate current	7.7 mA	Pentode ClassA
Screen current	1.6 mA	Pentode ClassA
Plate voltage	100 V	Triode ClassA
Plate current	8.5 mA	Triode ClassA



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	5500 uS	—
Amplification Factor	40	—
Grid To Plate Capacitance	2 pF	—
Input Capacitance	3 pF	—
Output Capacitance	2 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	125 V	TriodeUnit
Plate Current	10 mA	TriodeUnit

1965 WESTINGHOUSE DATA BOOK

Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	125 V	PentodeUnit
Screen Voltage	125 V	PentodeUnit
Plate Current	10 mA	PentodeUnit
Screen Current	3.5 mA	PentodeUnit

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	6500 uS	—
GridToPlateCapacitanceMaximum	0.015 pF	—
Input Capacitance	5 pF	—
Output Capacitance	3.5 pF	—