

ELECTRONIC TUBE REFERENCE

6485

Voltage - Pentode Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

High-transconductance sharp-cutoff pentode designed for wide-band and IF amplification. Its substantial transconductance provides strong fixed-gain signal amplification across broad frequency ranges.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7BK	BASE PINS	7
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7BK - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	500000 Ω
TRANSCONDUCTANCE	0.011 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	150 V
MAXIMUM PLATE DISSIPATION	3.2 W
MAXIMUM SCREEN DISSIPATION	0.6 W
MAXIMUM CATHODE CURRENT	25 mA
<i>Promoted from clearly identified printed ratings/characteristics; additional published operating points and capacitances retained in TUBE_SECTION_PARAMETER.</i>	

High-transconductance sharp-cutoff wide-band/IF pentode.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1938 Raytheon

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

1938 RAYTHEON

Section 1 · Pentode

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater or filament voltage	6.3 V	Published nominal or representative value
Heater or filament current	450 mA	Published nominal or representative value
Transconductance	9000 μ S	Published operating characteristic

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate dissipation	3.2 W	Published maximum rating



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

CAPACITANCE

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	10 pF	Section1
Output capacitance	3.6 pF	Section1
Grid-to-plate capacitance	0.02 pF	Section1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	300 V	ClassA
Screen voltage	150 V	ClassA
Cathode resistor	160 Ω	ClassA
Plate current	10 mA	ClassA
Screen current	2.5 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	500000 Ω	ClassA
Transconductance	9000 μS	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
Heater voltage	6.3 V	Nominal
Heater current	450 mA	Nominal
Plate voltage	300 V	Published operating table; OperatingPoint1
Plate voltage	300 V	Published operating table; OperatingPoint1
Plate voltage	150 V	Published operating table; OperatingPoint2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	10 mA	Published operating table; OperatingPoint1
Plate current	12.5 mA	Published operating table; OperatingPoint2

SOURCE OPERATING CONDITIONS

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1966 Tung Sol Electronic Tubes 4 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 4 OF 4

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	6.3 V	—
Heater/filament current	450 mA	—

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application summary	High-transconductance sharp-cutoff wide-band/IF pentode.	

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	300 V	—
Screen voltage	150 V	—
Plate current	10 mA	—
Transconductance	9000 μ S	—
Plate resistance	500000 ohm	—
Triode-connected transconductance	11000 μ S	—
Triode-connected amplification factor	40	—

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