

ELECTRONIC TUBE REFERENCE

CONSOLIDATED TECHNICAL DATA

1L4

1 SECTION
CONSTRUCTION
PENTODE

Voltage Pentode - Sharp Cutoff (single) electronic tube

Directly heated fixed-mu pentode for RF or audio-frequency voltage amplification in battery equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	6AR	BASE PINS	7
NOMINAL HEATER	1.4 V / 50 mA	PARALLEL HEATER	– / –
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

6AR - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	350000 Ω
TRANSCONDUCTANCE	0.001025 S
MAXIMUM PLATE VOLTAGE	110 V
MAXIMUM SCREEN VOLTAGE	90 V
MAXIMUM PLATE DISSIPATION	0.4 W
MAXIMUM SCREEN DISSIPATION	0.15 W
MAXIMUM CATHODE CURRENT	6.5 mA
<i>Typical characteristics vary by operating condition; representative published values promoted.</i>	

Directly heated fixed-mu pentode for RF or audio-frequency amplifier service in battery equipment.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1958 Brimar Radio Valve No 7

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

1958 BRIMAR RADIO VALVE NO 7

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	90 V	—
Plate Current	4.5 mA	—
Screen Voltage	90 V	—
Screen Current	2 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	1030 μ S	—
Plate Resistance	350000 ohm	—



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	110 V	Published handbook rating
Maximum screen voltage	90 V	Published handbook rating

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	90 V	ClassA
Screen voltage	90 V	ClassA
Control-grid voltage	0 V	ClassA
Plate current	4.5 mA	ClassA
Screen current	2 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	350000 ohm	Published handbook characteristic
Transconductance	1025 μ S	Published handbook characteristic
Filament voltage	1.4 V	DirectlyHeated DC filament
Filament current	50 mA	DirectlyHeated DC filament


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1960 RCA Industrial and Communications Types

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

1960 RCA INDUSTRIAL AND COMMUNICATIONS TYPES

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply	90 V	ClassA1
Screen supply	67.5 V	ClassA1
Screen current	1.2 mA	ClassA1
Plate current	2.9 mA	ClassA1


SOURCE DATA APPENDIX

1961 Ferranti Technical Handbook

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

1961 FERRANTI TECHNICAL HANDBOOK

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	1.4 V	—
HeaterOrFilamentCurrent	50 mA	—



SOURCE DATA APPENDIX

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	90 V	ClassA1
Screen Voltage	90 V	ClassA1



SOURCE DATA APPENDIX

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	0.008 pF	Section1
Input capacitance	3.6 pF	Section1
Output capacitance	7.5 pF	Section1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	90 V	ClassA
Screen voltage	67.5 V	ClassA
Plate current	2.9 mA	ClassA
Screen current	1.2 mA	ClassA
Plate voltage	100 V	ClassA
Screen voltage	90 V	ClassA
Plate current	4.5 mA	ClassA
Screen current	2 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	0.6 MΩ	90VPlate
Transconductance	925 μS	90VPlate
Plate resistance	0.35 MΩ	100VPlate
Transconductance	1025 μS	100VPlate



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1968 Mazda Belvu

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

1968 MAZDA BELVU

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater or filament voltage	1.4 V	Published nominal value
Heater or filament current	50 mA	Published nominal value
Transconductance	925 μ S	Published operating characteristic
Transconductance	925 μ S	Published nominal value



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

1971 RCA HB3 Binder 4 of 7

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

1971 RCA HB3 BINDER 4 OF 7

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament voltage	1.4 V	—
Filament current	50 mA	—
Maximum plate voltage	110 V	—
Maximum screen voltage	90 V	—
Maximum total cathode current	6.5 mA	—
Plate voltage	90 V	ClassA
Screen voltage	67.5 V	ClassA
Grid voltage	0 V	ClassA
Plate current	2.9 mA	ClassA
Screen current	1.2 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	600000 ohm	ClassA
Transconductance	925 μ S	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.008 pF	—
Input capacitance	3.6 pF	—
Output capacitance	7.5 pF	—