

ELECTRONIC TUBE REFERENCE

5636

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

PENTODE

Premium subminiature dual-control pentode for mixer, gated-amplifier, and specialized control applications in severe military and industrial environments. Independent control electrodes permit frequency conversion, gating, and gain-control functions beyond ordinary pentode amplification.

GENERAL CHARACTERISTICS

BASE DESIGNATION	8DC	BASE PINS	8
NOMINAL HEATER	6.3 V / 150 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

8DC - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	110000 Ω
TRANSCONDUCTANCE	0.0032 S
MAXIMUM PLATE VOLTAGE	165 V
MAXIMUM SCREEN VOLTAGE	155 V
MAXIMUM PLATE DISSIPATION	0.55 W
MAXIMUM SCREEN DISSIPATION	0.45 W
MAXIMUM CATHODE CURRENT	16 mA
<i>Grid-number-1 transconductance promoted as the primary transconductance; grid-number-3 transconductance and limits preserved as parameters.</i>	

Premium subminiature dual-control pentode for mixer and dual-control amplifier service in severe military/industrial environments.

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	150 mA	Nominal
Maximum Plate Voltage	165 V	—
Maximum Screen Voltage	155 V	—
Maximum Plate Dissipation	1.1 W	—
Maximum Cathode Current	11 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	3200 μ S	Typical
Plate Resistance	110000 ohm	Typical

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 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Conversion transconductance	1400 μ S	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1958 Compagnie General

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

1958 COMPAGNIE GENERAL

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Frequency Conversion Maximum	400 MHz	—
Grid 1 Transconductance	3200 μ S	—
Grid 3 Transconductance	950 μ S	—
Conversion Transconductance	1280 μ S	—
Plate Resistance	320000 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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	100 V	GatedAmplifier;Grid3TiedToCathode
Screen Voltage	100 V	GatedAmplifier;Grid3TiedToCathode
Cathode Resistor	150 ohm	GatedAmplifier;Grid3TiedToCathode
Plate Current	5.3 mA	GatedAmplifier;Grid3TiedToCathode
Screen Current	3.6 mA	GatedAmplifier;Grid3TiedToCathode
Plate Resistance	110000 ohm	GatedAmplifier;Grid3TiedToCathode

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	3200 μ S	GatedAmplifier;Grid3TiedToCathode
Plate Voltage	100 V	GatedAmplifier;Grid3Minus1V


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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cutoff characteristic	Sharp cutoff	—

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Gated amplifier / delay / mixer / gain control	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum useful frequency	400 MHz	—


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	—
Heater current	150 mA	—
Maximum positive grid #3 voltage	30 V	—
Maximum negative grid #4 voltage	-55 V	—
Maximum plate current	11 mA	—
Maximum grid #2 current	7 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid #4 transconductance	1950 μ S	DualControlAmplifier;Condition1
Grid #3 transconductance	950 μ S	DualControlAmplifier;Condition1
Conversion transconductance	1280 μ S	Mixer



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Mullard

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

1963 MULLARD

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	6.3 V	—
HeaterOrFilamentCurrent	150 mA	—
Plate Voltage	100 V	—
Screen Voltage	100 V	—
Grid Voltage	-1.4 V	—
Plate Current	5.3 mA	—
Screen Current	4.1 mA	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	3200 μ S	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Philips Electron Tubes Handbook V1

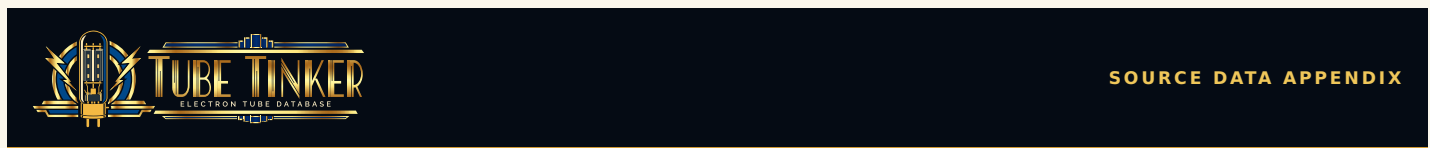
Published test conditions and operating points. Values on this page are preserved as reported by this source.

1963 PHILIPS ELECTRON TUBES HANDBOOK V1

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	100 V	Amplifier
Screen voltage	100 V	Amplifier
Grid 3 voltage	0 V	Amplifier
Cathode resistor	150 ohm	Amplifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	3.7–6.9 mA	NewTubeRange
Screen current	2.8–5.4 mA	NewTubeRange
Control-grid transconductance	2700–4000 μ S	—
Grid-3 transconductance	500 μ S	—
Plate resistance	110 kOhm	—



1963 Philips Electron Tubes Handbook V3

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

1963 PHILIPS ELECTRON TUBES HANDBOOK V3

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	100 V	Amplifier
Screen voltage	100 V	Amplifier
Cathode resistor	150 Ω	Amplifier
Plate current	5.3 mA	Amplifier
Screen current	4 mA	Amplifier
Control-grid-1 transconductance	3200 μS	Section1
Control-grid-3 transconductance	500 μS	Section1
Plate resistance	110000 Ω	Section1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Mixer plate current	4 mA	Mixer



SOURCE DATA APPENDIX

1966 Tung Sol Electronic Tubes 3 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 3 OF 4

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	200 V	DualControlAmplifier

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid #2 voltage	200 V	DualControlAmplifier
Cathode resistor	150 ohm	DualControlAmplifier
Plate current	5.3 mA	DualControlAmplifier
Grid #2 current	3.6 mA	DualControlAmplifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid #1 transconductance	3200 uS	DualControlAmplifier
Grid #3 transconductance	500 uS	DualControlAmplifier
Plate resistance	110000 ohm	DualControlAmplifier



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1967 Mullard Receiving Tubes for Maintenance

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

1967 MULLARD RECEIVING TUBES FOR MAINTENANCE

Section 1 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate-to-Control-Grid Capacitance	<20 mpF	PublishedCapacitance
Plate-to-Suppressor-Grid Capacitance	<1.1 pF	PublishedCapacitance
Control-to-Suppressor-Grid Capacitance	<150 mpF	PublishedCapacitance
Input Capacitance	4 pF	PublishedCapacitance
Suppressor Input Capacitance	3.7 pF	PublishedCapacitance
Output Capacitance	3.4 pF	PublishedCapacitance

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	100 V	PublishedCharacteristics

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen Voltage	100 V	PublishedCharacteristics


SOURCE DATA APPENDIX

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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-Number 3 Transconductance	950 μ S	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	5.3 mA	—
Screen Current	3.4 mA	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-1 to Plate Capacitance Maximum	0.015 pF	WithShield
Grid-3 to Plate Capacitance Maximum	1.1 pF	WithShield

CHARACTERISTICLIMIT		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-1 Transconductance Minimum	2700 μ S	Initial
Grid-1 Transconductance Maximum	4000 μ S	Initial


SOURCE DATA APPENDIX

1971 RCA HB3 Binder 3 of 7

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

1971 RCA HB3 BINDER 3 OF 7

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	—165 V	—
Maximum screen voltage	—155 V	—
Maximum plate dissipation	—1.1 W	—
Maximum screen dissipation	—0.7 W	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	110000 Ω	—
Transconductance	3200 μS	—
Plate supply voltage	100 V	ClassA
Grid No.2 supply voltage	100 V	ClassA
Cathode resistor	150 Ω	ClassA



SOURCE DATA APPENDIX

1999 Philips 0-D

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

1999 PHILIPS 0-D

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical plate voltage	100 V	—
Typical screen voltage	100 V	—
Typical cathode resistor	150 ohm	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical plate current	5.3 mA	—
Typical screen current	4 mA	—
Transconductance	3200 μ S	—
Plate resistance	110 kohm	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	4 pF	—

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