

ELECTRONIC TUBE REFERENCE

6J7G

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Glass-envelope sharp-cutoff pentode for detector, RF, and general voltage-amplifier service. High plate resistance provides substantial voltage gain, while manufacturer data also support triode-connected operation.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7R	BASE PINS	7
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7R - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – SH	A	SH – Internal Shield	CONNECTED
PIN2 – H	–	H – Heater	CONNECTED
PIN3 – P	A	P – Plate (Anode)	CONNECTED
PIN4 – G2	A	G2 – Screen Grid	CONNECTED
PIN5 – G3	A	G3 – Suppressor Grid	CONNECTED
PIN7 – H	–	H – Heater	CONNECTED
PIN8 – K	A	K – Cathode	CONNECTED
CAP1 – G1	A	G1 – Control Grid	CONNECTED

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	1000000 Ω
TRANSCONDUCTANCE	0.00123 S
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	125 V
MAXIMUM PLATE DISSIPATION	0.75 W
MAXIMUM SCREEN DISSIPATION	0.1 W
<i>Promoted values mapped from printed rating/approximate-data tables; additional operating points and capacitances retained as parameters.</i>	

Glass version of the 6J7 sharp-cutoff amplifier/detector pentode.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1937 Raytheon Radio Receiving Tubes

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

1937 RAYTHEON RADIO RECEIVING TUBES

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	250 V	Published datasheet rating
Maximum screen voltage	125 V	Published datasheet rating
Plate voltage	250 V	ClassA
Screen voltage	100 V	ClassA
Screen current	0.8 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	1000000 ohm	Published datasheet characteristic
Transconductance	1225 μ S	Published datasheet characteristic
Heater voltage	6.3 V	Published heater rating
Heater current	300 mA	Published heater rating



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1946 Amalgamated Wireless

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

1946 AMALGAMATED WIRELESS

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Output capacitance	0.38 pF	Direct interelectrode capacitance



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1948 Brimar Radio Valve Manual

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

1948 BRIMAR RADIO VALVE MANUAL

Section 1 · Pentode

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode-connected operation	Published	TriodeConnection



SOURCE OPERATING CONDITIONS

1950 Sylvania

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

1950 SYLVANIA

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	1500000 ohm	—
Transconductance	1225 μ S	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	300 V	—
Maximum Screen Voltage	125 V	—
Maximum Plate Dissipation	0.75 W	—
Maximum Screen Dissipation	0.1 W	—
Plate Voltage	250 V	Pentode connection
Screen Voltage	100 V	Pentode connection



SOURCE OPERATING CONDITIONS

1955 Marconi

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

1955 MARCONI

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-All Capacitance	4.7 pF	—
Anode-All Capacitance	9.9 pF	—
Anode-Grid Capacitance	0.0038 pF	—
Typical Anode Voltage	250 V	—
Typical Screen Voltage	100 V	—
Typical Grid Bias	-3 V	—
Triode-Connected Service	1 boolean	—
Oscillator Service	1 boolean	—



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

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	RF amplification	—



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	300 V	Published handbook rating
Maximum screen voltage	150 V	Published handbook rating
Plate voltage	250 V	ClassA
Screen voltage	100 V	ClassA
Control-grid bias	3 V	ClassA
Plate current	2 mA	ClassA
Screen current	0.5 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	1000000 ohm	Published handbook characteristic
Transconductance	1225 μS	Published handbook characteristic
Heater voltage	6.3 V	Published heater rating
Heater current	300 mA	Published heater rating



SOURCE DATA APPENDIX

1961 Ferranti Technical Handbook

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

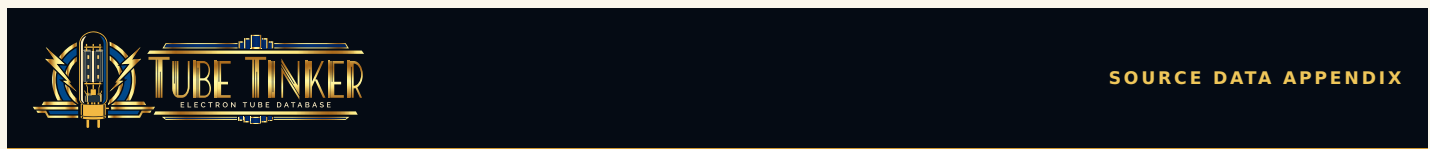
1961 FERRANTI TECHNICAL HANDBOOK

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA;PentodeConnection
Screen-grid voltage	100 V	ClassA;PentodeConnection
Control-grid voltage	-3 V	ClassA;PentodeConnection
Plate current	2 mA	ClassA;PentodeConnection
Screen-grid current	0.5 mA	ClassA;PentodeConnection

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	1250 μ S	PentodeConnection
Plate resistance	1500000 Ohm	PentodeConnection
Control-grid cutoff voltage	-7 V	PentodeConnection
Amplification factor	20 ratio	TriodeConnection
Transconductance	1900 μ S	TriodeConnection
Plate resistance	100000 Ohm	TriodeConnection

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	4.6 pF	PentodeConnection
Output capacitance	12 pF	PentodeConnection



SOURCE OPERATING CONDITIONS

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	250 V	Published operating/characteristic table
Screen Voltage	100 V	Published operating/characteristic table

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid Voltage	-3 V	Published operating/characteristic table

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	2 mA	Published operating/characteristic table
Screen Current	0.5 mA	Published operating/characteristic table
Transconductance	1225 uS	Published operating/characteristic table
Plate Resistance	7 ohm	Published operating/characteristic table

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