

ELECTRONIC TUBE REFERENCE

6080

Power - Triode electronic tube

CONSOLIDATED TECHNICAL DATA
2 SECTIONS
CONSTRUCTION
TRIODE-TRIODE

High-current dual power triode designed for series-voltage-regulator and power-control service. Its identical low-mu sections have very low plate resistance, emphasizing current handling and low voltage drop rather than voltage amplification.

GENERAL CHARACTERISTICS

BASE DESIGNATION	8BD	BASE PINS	8
NOMINAL HEATER	6.3 V / 2.5 A	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

8BD - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – 2G1	B	G1 – Control Grid	CONNECTED
PIN2 – 2P	B	P – Plate (Anode)	CONNECTED
PIN3 – 2K	B	K – Cathode	CONNECTED
PIN4 – 1G1	A	G1 – Control Grid	CONNECTED
PIN5 – 1P	A	P – Plate (Anode)	CONNECTED
PIN6 – 1K	A	K – Cathode	CONNECTED
PIN7 – H	–	H – Heater	CONNECTED
PIN8 – H	–	H – Heater	CONNECTED

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	280 Ω
TRANSCONDUCTANCE	0.007 S
AMPLIFICATION FACTOR	2
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	13 W
MAXIMUM CATHODE CURRENT	150 mA
<i>Representative section for repeated identical sections.</i>	

SECTION2 Triode	
PLATE RESISTANCE	280 Ω
TRANSCONDUCTANCE	0.007 S
AMPLIFICATION FACTOR	2
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	13 W
MAXIMUM CATHODE CURRENT	150 mA
<i>Identical second physical section; duplicated from representative section per physical-section-row policy.</i>	

High-current dual power triode for series-voltage-regulator and power-control service.



SOURCE OPERATING CONDITIONS

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1953 AEG

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

1953 AEG

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical anode voltage	135 V	—
Typical anode current per system	125 mA	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Interelectrode capacitance present	TRUE	—



SOURCE OPERATING CONDITIONS

1958 Compagnie General

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1958 COMPAGNIE GENERAL

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	250 V	Each section
Maximum Plate Dissipation	13 W	Each section
Maximum Plate Current	150 mA	Each section
Maximum Heater-to-Cathode Voltage	300 V	—



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195X General Electric Essential Characteristics

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195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	250 V	Published handbook rating
Plate voltage	135 V	ClassA
Cathode resistor	125 ohm	DCAmplifier
DC plate voltage	135 V	DCAmplifier
Published load/output value	7000	DCAmplifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	280 μ S	Published handbook characteristic
Heater/filament voltage	6.3 V	Published heater/filament rating
Heater/filament current	2.5 A	Published heater/filament rating
Published characteristic value	280	DCAmplifier



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1960 RCA Industrial and Communications Types

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1960 RCA INDUSTRIAL AND COMMUNICATIONS TYPES

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	2.5 A	—



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1963 Philips Electron Tubes Handbook V1

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1963 PHILIPS ELECTRON TUBES HANDBOOK V1

Section 1 · Triode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	8.6 pF	EachSection
Plate capacitance	2.5 pF	EachSection
Grid capacitance	5.5 pF	EachSection

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	100 V	SeriesRegulator;EachSection
Plate current	100 mA	SeriesRegulator;EachSection
Cathode resistor	300 Ω	SeriesRegulator;EachSection
Plate current	125 mA	SeriesRegulator;EachSection
Cathode resistor	250 Ω	SeriesRegulator;EachSection
Peak inverse plate voltage maximum	3000 V	BoosterService
Application	Series regulator, servo, or booster triode	Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	6500 μS	EachSection

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	300 Ω	EachSection
Transconductance	7000 μS	EachSection
Plate resistance	280 Ω	EachSection
Amplification factor	2	EachSection



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1963 Philips Electron Tubes Handbook V3

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1963 PHILIPS ELECTRON TUBES HANDBOOK V3

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
provide a minimum voltage drop of	15 V	provide a minimum voltage drop of 15 V D.C. at the
Heater voltage	6.3 V	parallel supply $V_f = 6.3 \text{ V}$
Heater current	2.5 mA	alimentation parallele $I_f = 2.5 \cdot 0.24 \text{ A}$

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	8.6 pF	$C_{ag} = 8.6 \text{ pF}$ $C_{a'g'} = 8.6 \text{ pF}$
Plate capacitance	2.5 pF	$C_a = 2.5 \text{ pF}$ $C_{a'} = 2.5 \text{ pF}$
Grid capacitance	5.5 pF	$C_g = 5.5 \text{ pF}$ $C_{g'} = 5.5 \text{ pF}$
Cathode-heater capacitance	7 pF	$C_{kf} = 7 \text{ pF}$ $C_{k'f} = 7 \text{ pF}$

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	135 V	$V_{ba} = 135 \text{ V}$
Plate voltage	100 V	$V_a = 100 - \text{V}$
Plate current	100 mA	$I_a = 100 \text{ } 125 \text{ mA}$
Cathode resistor	300 ohm	$R_k = 300 \text{ } 250 \text{ } 0$

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor	2	$\mu = 2.2$
Plate resistance	300 kohm	$R_i = 300\ 290\ 0$
Heater voltage	6.3 V	$V_f = 6.3\ V$
Plate supply voltage	135 V	$V_{ba} = 135\ V$



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1967 Mullard Receiving Tubes for Maintenance

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1967 MULLARD RECEIVING TUBES FOR MAINTENANCE

Section 1 · Triode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-Plate Capacitance	8.6 pF	EachSection
Input Capacitance	5.5 pF	EachSection
Output Capacitance	2.5 pF	EachSection
Heater-to-Cathode Capacitance	7 pF	EachSection
Plate-to-Plate Intersection Capacitance	2.2 pF	BetweenSections
Grid-to-Grid Intersection Capacitance	0.5 pF	BetweenSections

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage	135 V	Characteristics
Plate Current	125 mA	Characteristics
Cathode Bias Resistor	250 ohm	Characteristics
Plate Resistance	280 ohm	Characteristics
Transconductance	7000 uS	Characteristics
Amplification Factor	2	Characteristics

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage	550 V	AbsoluteRatings
Plate Voltage	250 V	AbsoluteRatings


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1968 Mazda Belvu

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1968 MAZDA BELVU

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	2.55 A	Nominal
Maximum Plate Voltage	250 V	—
Maximum Plate Dissipation	13 W	—
Maximum Cathode Current	125 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	7000 μ S	Typical
Amplification Factor	2	Typical


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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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage – published value 1	6 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Voltage – published value 2	3 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Voltage – published value 3	10 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Current	25 A	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid to Plate	8	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid of Unit No.1 to Grid of Unit No.2	0.5	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
to Plate of Unit No.2	2	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate–Supply Voltage	135 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Cathode–Bias Resistor	250 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Resistance	280 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Transconductance	7000	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Current	125 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 1 –Grid of – published value 1	1	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 1 –Grid of – published value 2	5	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 2 –Plate of – published value 1	2	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.



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1975 RCA RC30

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1975 RCA RC30

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak	300 V	Other
Plate Voltage	250 V	MaximumRatings
Plate Current	125 mA	MaximumRatings

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate (each unit)	8 pF	Capacitance
Input (each unit)	6 pF	Capacitance
Output (each unit)	2.2 pF	Capacitance
Heater to Cathode (each unit)	11 pF	Capacitance
Grid of Unit No.1 to Grid of Unit No.2	0.5 pF	Capacitance
Plate of Unit No.1 to Plate of Unit No.2	2 pF	Capacitance

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate-Supply Voltage	135 V	Characteristics

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode-Bias Resistor	250 ohm	Characteristics
Plate Resistance	280 ohm	Characteristics
Transconductance	7000 uS	Characteristics
Plate Current	125 mA	Characteristics



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1999 Philips E-Z

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

1999 PHILIPS E-Z
Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Automatic bias	1 mA	Automatic bias 1s recommended. With fixed bias the anode
provide a minimum voltage drop of	15 V	provide a minimum voltage drop of 15 V D.C. at the

TUBE TINKER

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