

ELECTRONIC TUBE REFERENCE

5902

Power - Beam Single (NOT sweep) (under 10W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
BEAMPOWER

Subminiature beam pentode designed for audio power amplification where compact construction and resistance to severe shock and vibration are important.

GENERAL CHARACTERISTICS

BASE DESIGNATION	8DL	BASE PINS	8
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

8DL - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Beam Power	
PLATE RESISTANCE	150000 Ω
TRANSCONDUCTANCE	0.0042 S
AMPLIFICATION FACTOR	6
MAXIMUM PLATE VOLTAGE	165 V
MAXIMUM SCREEN VOLTAGE	155 V
MAXIMUM PLATE DISSIPATION	4.1 W
MAXIMUM SCREEN DISSIPATION	0.4 W
MAXIMUM CATHODE CURRENT	50 mA
Class A beam-power section; published 110-V operating point and capacitances retained as parameters.	

Subminiature heater-cathode beam pentode designed for audio power-amplifier service where severe shock, vibration and compact construction are important.



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 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	150000 ohm	Published datasheet value



SOURCE OPERATING CONDITIONS

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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 · Beam Power

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	450 mA	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Power Output	1 W	ClassA



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 · Beam Power

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input Capacitance	6.5 pF	—
Output Capacitance	7.5 pF	—
Grid-to-Plate Capacitance	0.11 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	110 V	ClassA
Screen Voltage	110 V	ClassA
Cathode Resistor	270 ohm	ClassA
Plate Current	30 mA	ClassA
Screen Current	2.2 mA	ClassA
Load Resistance	3000 ohm	ClassA
Power Output	1 W	ClassA



SOURCE DATA APPENDIX

1963 Mullard

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

1963 MULLARD

Section 1 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	6.3 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentCurrent	450 mA	—
Plate Voltage	100 V	—
Screen Voltage	100 V	—
Grid Voltage	-8.3 V	—
Plate Current	30 mA	—
Screen Current	12 mA	—
Transconductance	4200 uS	—
PlateToGridCapacitanceMax	0.2 pF	—
Input Capacitance	6.5 pF	—
Output Capacitance	7.5 pF	—


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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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 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	450 mA	—
Normal plate voltage	110 V	ClassA
Normal screen voltage	110 V	ClassA
Normal cathode resistor	270 ohm	ClassA
Plate current	30 mA	ClassA
Screen current	2.2 mA	ClassA
Power output	0.75 W	ClassA
Maximum plate voltage	165 V	—
Maximum screen voltage	155 V	—
Maximum plate dissipation	4.1 W	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum screen dissipation	0.3 W	—
Maximum cathode current	50 mA	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1967 Mullard Receiving Tubes for Maintenance

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1967 MULLARD RECEIVING TUBES FOR MAINTENANCE

Section 1 · Beam Power

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate-to-Grid Capacitance	<200 mpF	PublishedCapacitance
Input Capacitance	6.5 pF	PublishedCapacitance
Output Capacitance	7.5 pF	PublishedCapacitance

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	100 V	PublishedCharacteristics
Screen Voltage	100 V	PublishedCharacteristics
Plate Current	30 mA	PublishedCharacteristics
Screen Current	1.2 mA	PublishedCharacteristics
Transconductance	4200 uS	PublishedCharacteristics
Screen-to-Control-Grid Mu	6	PublishedCharacteristics
Plate Resistance	>10 kohm	PublishedCharacteristics
Control Grid Voltage	-8.3 V	PublishedCharacteristics

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage	330 V	AbsoluteRatings
Plate Voltage	165 V	AbsoluteRatings

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Dissipation	3.7 W	AbsoluteRatings
Screen Supply Voltage	310 V	AbsoluteRatings
Screen Voltage	155 V	AbsoluteRatings
Screen Dissipation	0.4 W	AbsoluteRatings
Cathode Current	50 mA	AbsoluteRatings
Heater-Cathode Voltage	200 V	AbsoluteRatings


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1968 General Electric Co

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1968 GENERAL ELECTRIC CO

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	110 V	ClassA
Screen Voltage	110 V	ClassA
Plate Current	30 mA	ClassA
Load Resistance	3000 ohm	ClassA
Power Output	1 W	ClassA
Distortion	10 %	ClassA


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode current	30 mA	Typical
Screen current	2.2 mA	Typical
Output power	1 W	Typical
Anode-screen-cathode-heater capacitance	7.2 pF	Interelectrode

TUBE TINKER

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