

ELECTRONIC TUBE REFERENCE

50L6GT

Power - Beam (NOT sweep) electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
BEAMPOWER

Glass-octal beam-power tube widely used in audio-output stages of AC/DC radio receivers, delivering substantial power from low supply voltages.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7AC	BASE PINS	8
NOMINAL HEATER	50 V / 150 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7AC - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – Pin 1	–	–	NC · verified
PIN2 – Pin 2	–	H – Heater	CONNECTED · verified
PIN3 – Pin 3	A	P – Plate (Anode)	CONNECTED · verified
PIN4 – Pin 4	A	G2 – Screen Grid	CONNECTED · verified
PIN5 – Pin 5	A	G1 – Control Grid	CONNECTED · verified
PIN7 – Pin 7	–	H – Heater	CONNECTED · verified
PIN8 – Pin 8	A	BP – Beam-Forming Plate	CONNECTED · verified
PIN8 – Pin 8	A	K – Cathode	CONNECTED · verified

SECTION RATINGS

SECTION1 Beam Power	
PLATE RESISTANCE	28000 Ω
TRANSCONDUCTANCE	0.008 S
AMPLIFICATION FACTOR	83
MAXIMUM PLATE VOLTAGE	200 V
MAXIMUM SCREEN VOLTAGE	125 V
MAXIMUM PLATE DISSIPATION	10 W
MAXIMUM SCREEN DISSIPATION	1.25 W
MAXIMUM CATHODE CURRENT	55 mA
200-V plate operating column used for promoted characteristics.	

Glass-octal beam power tube used in the audio output stage of AC/DC radio receivers. Extracted from the supplied RCA Receiving Tube Manual excerpt.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1939 Arcturus

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

1939 ARCTURUS

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	110 V	—
Screen-grid voltage	110 V	—
Control-grid voltage	-7.5 V	—
Plate current	45 mA	—
Load resistance	2000 ohm	—
Power output	1.5 W	—
Total harmonic distortion	10 %	—



SOURCE OPERATING CONDITIONS

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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 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	110 V	—
Plate Current	49 mA	—
Screen Voltage	110 V	—
Screen Current	4 mA	—
Control Grid Voltage	-7.5 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Optimum Load	1500 ohm	—
Power Output	2.1 W	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	10000 ohm	—
Transconductance	9000 μ S	—


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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 · Beam Power

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode Voltage	200 V	—
Anode Current	50 mA	—
Screen Voltage	110 V	—
Control Grid Voltage	-8 V	—
Optimum Load	3000 ohm	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power Output	4.3 W	ClassA


SOURCE DATA APPENDIX

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	200 V	Published handbook rating
Maximum screen voltage	125 V	Published handbook rating
Plate voltage	200 V	ClassA
Screen voltage	125 V	ClassA
Control-grid bias	46 V	ClassA
Plate current	28 mA	ClassA
Screen current	2.2 mA	ClassA
Load resistance	4000 ohm	ClassA
Power output	3.8 W	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	28000 ohm	Published handbook characteristic
Transconductance	8000 μ S	Published handbook characteristic
Heater/filament voltage	50 V	Published heater/filament rating
Heater/filament current	150 mA	Published heater/filament 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 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	50 V	—
HeaterOrFilamentCurrent	150 mA	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power Output	4.3 W	ClassA



SOURCE OPERATING CONDITIONS

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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 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	50 V	—
Heater current	150 mA	—
Plate voltage	110 V	ClassA1
Screen voltage	110 V	ClassA1
Power output	2.1 W	ClassA1;110VPlate
Power output	3.8 W	ClassA1;200VPlate

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	13000 ohm	110VPlate
Transconductance	8000 uS	110VPlate



1965 Sylvania Electronic Tubes Vol3

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

1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 1 · Beam Power

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.8 pF	—
Input capacitance	15 pF	—
Output capacitance	9 pF	—

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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	9500 uS	ClassA
Plate resistance	30000 Ohm	ClassA



SOURCE DATA APPENDIX

SOURCE PDF

1965 Westinghouse Data Book

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

1965 WESTINGHOUSE DATA BOOK

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage maximum	200 V	—
Screen voltage maximum	125 V	—
Class-A plate voltage low	110 V	ClassA
Class-A power output low	2.1 W	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Class-A plate voltage high	200 V	ClassA
Class-A power output high	4.3 W	ClassA

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Class-A plate resistance low	13000 ohm	ClassA
Class-A plate resistance high	30000 ohm	ClassA

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	AC/DC receiver audio output	—



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
Typical plate voltage	200 V	ClassA
Typical screen voltage	125 V	ClassA
Zero-signal plate current	49 mA	ClassA
Load resistance	4000 ohm	ClassA
Maximum-signal power output	3.8 W	ClassA
Maximum plate voltage	200 V	PromotedValue
Maximum screen voltage	125 V	PromotedValue
Maximum plate dissipation	10 W	PromotedValue
Maximum screen dissipation	1.25 W	PromotedValue
Maximum Grid #2 Voltage	125 V	PublishedTable
Maximum Grid #2 Dissipation	1.25 W	PublishedTable

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Current 0.15	15 A	PublishedTable

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	24000 ohm	PromotedValue
Transconductance	0.005 A/V	PromotedValue
Max. 50 Volts	150 mA	PublishedTable



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1971 RCA HB3 Binder 5 of 7

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

1971 RCA HB3 BINDER 5 OF 7

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	50 V	—
Heater current	150 mA	—
Plate voltage	200 V	ClassA
Screen voltage	110 V	ClassA
Grid voltage	-8 V	ClassA
Zero-signal plate current	50 mA	ClassA
Maximum-signal plate current	55 mA	ClassA
Load resistance	3000 ohm	ClassA
Power output	4.3 W	ClassA
Maximum plate voltage	200 V	—
Maximum screen voltage	117 V	—
Plate dissipation	10 W	—
Screen dissipation	1.25 W	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	30000 ohm	ClassA
Transconductance	9500 uS	ClassA



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1975 RCA RC30

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

1975 RCA RC30

Section 1 · Beam Power

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.6 pF	—
Input capacitance	15 pF	—
Output capacitance	9.5 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	200 V	ClassA CathodeBias
Screen supply voltage	125 V	ClassA CathodeBias
Maximum-signal plate current	47 mA	ClassA CathodeBias
Maximum-signal screen current	8.5 mA	ClassA CathodeBias
Load resistance	4000 ohm	ClassA CathodeBias
Power output	3.8 W	ClassA CathodeBias