

ELECTRONIC TUBE REFERENCE

6AQ5

Power - Beam (NOT sweep) electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
BEAMPOWER

Miniature beam-power output tube designed for audio-frequency output-amplifier service in radio and other consumer electronic equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7BZ	BASE PINS	7
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7BZ - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – Pin 1	A	G1 – Control Grid	CONNECTED • verified
PIN2 – Pin 2	A	G3 – Suppressor Grid	CONNECTED • verified
PIN2 – Pin 2	A	K – Cathode	CONNECTED • verified
PIN3 – Pin 3	–	H – Heater	CONNECTED • verified
PIN4 – Pin 4	–	H – Heater	CONNECTED • verified
PIN5 – Pin 5	A	P – Plate (Anode)	CONNECTED • verified
PIN6 – Pin 6	A	G2 – Screen Grid	CONNECTED • verified
PIN7 – Pin 7	A	G1 – Control Grid	CONNECTED • verified

SECTION RATINGS

SECTION1 Beam Power	
PLATE RESISTANCE	52000 Ω
TRANSCONDUCTANCE	0.0041 S
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	12 W
MAXIMUM SCREEN DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	35 mA
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
<i>Promoted from published ratings/characteristics; identical repeated sections compressed where applicable.</i>	

Indirectly heated power output tube intended for AF output-amplifier service.



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 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	4900 μ S	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	250 V	—
Maximum Screen Voltage	250 V	—
Maximum Plate Dissipation	12 W	—
Maximum Screen Dissipation	2.5 W	—
Application	Audio power amplifier	—



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 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	450 mA	—
Maximum plate voltage	250 V	—
Maximum screen voltage	250 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate dissipation	12 W	—
Maximum screen dissipation	2 W	—
Triode-connected dissipation	14 W	TriodeConnection

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Primary application	Beam output tetrode equivalent to 6AQ5 for audio power service.	—


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	250 V	—
Plate Current	45 mA	—
Screen Voltage	250 V	—
Screen Current	4.5 mA	—
Power Output	4.5 W	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	58000 ohm	—
Transconductance	4100 μ S	—


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	250 V	Published handbook rating
Maximum screen voltage	250 V	Published handbook rating
Plate voltage	250 V	ClassA
Screen voltage	250 V	ClassA
Control-grid bias	12.5 V	ClassA
Plate current	45 mA	ClassA
Screen current	4.5 mA	ClassA
Load resistance	5000 ohm	ClassA
Power output	4.5 W	ClassA
Maximum positive pulse plate voltage	1100 V	VerticalDeflection TriodeConnection
Maximum plate dissipation	9 W	VerticalDeflection TriodeConnection
Maximum DC cathode current	35 mA	VerticalDeflection TriodeConnection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	52000 ohm	Published handbook characteristic
Transconductance	4100 μ S	Published handbook characteristic
Heater voltage	6.3 V	Published heater rating
Heater current	450 mA	Published heater rating



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
MaximumPeakPositivePlateVoltage	1100 V	—
Maximum Signal Power Output	4.5 W	ClassA;PlateVoltage=250V



SOURCE DATA APPENDIX

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	0.4 pF	—
Input capacitance	8 pF	—
Output capacitance	8.5 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Class-A plate voltage	180 V	ClassA
Class-A screen voltage	180 V	ClassA
Class-A grid voltage	-8.5 V	ClassA
Class-A zero-signal plate current	29 mA	ClassA
Class-A max-signal plate current	30 mA	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Class-A screen current zero signal	3 mA	ClassA
Class-A screen current max signal	4 mA	ClassA
Class-A load resistance	5500 ohm	ClassA
Class-A output power	2 W	ClassA
Class-A THD	8 %	ClassA
Alternate Class-A plate voltage	250 V	ClassA
Alternate Class-A output power	4.5 W	ClassA
Class-AB push-pull plate voltage	250 V	ClassAB,PushPull
Class-AB push-pull plate-to-plate load	10000 ohm	ClassAB,PushPull



SOURCE OPERATING CONDITIONS

[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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	6.3 V	—
HeaterOrFilamentCurrent	450 mA	—
Transconductance	4100 uS	—
Input Capacitance	8.5 pF	—
Output Capacitance	8.5 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	250 V	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen Voltage	250 V	ClassA
Plate Current	45 mA	ClassA
Screen Current	4.5 mA	ClassA
Load Resistance	5000 ohm	ClassA
Power Output	4.5 W	ClassA
PushPullPowerOutput	14 W	TwoTubes;PushPull;ClassAB
Grid Voltage	-12.5 V	ClassA



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1966 Tung Sol Electronic Tubes 1 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 1 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published table
Heater current	450 mA	Published table
Plate resistance	52000 ohm	Published table
Transconductance	4200 μS	Published table

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Screen voltage	250 V	ClassA
Zero-signal plate current	45 mA	ClassA
Maximum-signal screen current	7 mA	ClassA
Vertical-deflection maximum peak plate voltage	1100 V	VerticalDeflection
Maximum average cathode current	40 mA	VerticalDeflection

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum peak cathode current	115 mA	VerticalDeflection


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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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 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Positive Pulse Plate Voltage	1100 V	TriodeConnection;VerticalDeflection


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1968 Mazda Belvu

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

1968 MAZDA BELVU
Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
ĖELVU Amplificateur de sortie A.F	6 A	—
Tension filAment uesemeennnnennnnnnnnnnnnnnnnnn V	6.3 V	—
Heater current	450 mA	—
Plate voltage+... scorsrernsoncene V	250 V	—
Tension de grille n°2.....-0cecccccecees VEZ	250 V	—
Plate dissipation s Pä	12 W	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Dissipation de grille n°2 ...c PE	2 W	—
Tension entre filament et cathode Vfk	90 V	—
Tension d'Anod@ reseroonceseverereensecces VA 180	250 V	—
Screen-grid voltage..... usccécsrerecereseuss VEZ 180	250 V	—
Tension de grille n° 1...c VEI -8,5	-12.5 V	—
Tension de crête d'entrée Ve CI 8,5	12.5 V	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacitance de sortie Cs	6 pF	InterelectrodeCapacitance
Capacitance grille n° 1/ anode Cg,/a ;	0.35 pF	InterelectrodeCapacitance
Capacitance d'Entrée neerrsrnsenceensenitareneennsssesenes Ce	8 pF	InterelectrodeCapacitance
Capacitance de sortie Cs	11 pF	InterelectrodeCapacitance
Capacitance grille n°1 /anode Cg,/a	0.17 pF	InterelectrodeCapacitance



SOURCE OPERATING CONDITIONS

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1969 Tesla Manual of Electronic Tubes

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

1969 TESLA MANUAL OF ELECTRONIC TUBES

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power Output	4.5 W	ClassA;OneTube
Power Output	10 W	ClassAB;PushPull;TwoTubes

TUBE TINKER

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and their source documents.

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