

ELECTRONIC TUBE REFERENCE

50B5

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

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
BEAMPOWER

Series-heater power tetrode designed for low-frequency audio-output amplification in transformerless radio and consumer receiver equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7BZ	BASE PINS	7
NOMINAL HEATER	50 V / 150 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	14000 Ω
TRANSCONDUCTANCE	0.0075 S
MAXIMUM PLATE VOLTAGE	150 V
MAXIMUM SCREEN VOLTAGE	117 V
MAXIMUM PLATE DISSIPATION	5 W
MAXIMUM SCREEN DISSIPATION	1 W
<i>beam power amplifier</i>	

Series-heater power tetrode for low-frequency audio output amplification.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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	135 V	Published handbook rating
Maximum screen voltage	117 V	Published handbook rating
Plate voltage	110 V	ClassA
Screen voltage	110 V	ClassA
Control-grid bias	7.5 V	ClassA
Plate current	49 mA	ClassA
Screen current	4 mA	ClassA
Load resistance	2500 ohm	ClassA
Power output	1.9 W	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	10000 ohm	Published handbook characteristic
Transconductance	7500 μ S	Published handbook characteristic
Heater/filament voltage	50 V	Published heater/filament rating
Heater/filament current	150 mA	Published heater/filament 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
Power Output	2 W	ClassA
ElectricalDataReference	35B5 except heater characteristics	—



SOURCE DATA APPENDIX

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	110 V	ClassA
Typical screen voltage	110 V	ClassA
Zero-signal plate current	49 mA	ClassA
Load resistance	2500 ohm	ClassA
Maximum-signal power output	2.3 W	ClassA
Maximum plate voltage	135 V	PromotedValue
Maximum screen voltage	135 V	PromotedValue
Maximum plate dissipation	6 W	PromotedValue
Maximum screen dissipation	1.25 W	PromotedValue
Maximum Gr10 #2 Voltage	117 V	PublishedTable
Total Dc And Peak	200 V	PublishedTable
Zero-Signal Plate Current	49 mA	PublishedTable

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Zero-Signal Grid #2 Current	4 mA	PublishedTable
Ef =	50 V	PublishedTable
Eb =	110 V	PublishedTable
Ecz =	110 V	PublishedTable
Eci =	-7.5 V	PublishedTable

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	10000 ohm	PromotedValue
Transconductance	0.0075 A/V	PromotedValue
50 Volts	150 mA	PublishedTable
Grid To Plate: (G1 To P)	0.6 MMF	PublishedTable
Output; P To (H+K+G2+G)}	8.5 MMF	PublishedTable



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1968 Mazda Belvu

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

SOURCE PDF

1968 MAZDA BELVU

Section 1 · Beam Power

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	AudioOutput text	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1971 RCA HB3 Binder 5 of 7

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

SOURCE PDF

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	117 V	—
Maximum Screen Voltage	117 V	—
Plate Dissipation	5.5 W	—
Screen Dissipation	1.25 W	—
Plate Voltage	110 V	—
Screen Voltage	110 V	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	14000 Ω	—
Transconductance	7500 μS	—

TUBE TINKER

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and their source documents.

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