



ELECTRONIC TUBE REFERENCE

6BK4B

Triode - HV Shunt Regulator electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

High-voltage triode designed for electronic voltage-regulator service, controlling or shunting current to stabilize demanding power supplies.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	8
NOMINAL HEATER	6.3 V / 200 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
TRANSCONDUCTANCE	0.0002 S
AMPLIFICATION FACTOR	2000
MAXIMUM PLATE VOLTAGE	27000 V
MAXIMUM PLATE DISSIPATION	40 W
MAXIMUM CATHODE CURRENT	1.6 mA
High-voltage shunt-regulator beam triode.	

High-voltage triode intended for shunt-regulator service in very-high-voltage circuits.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Unregulated DC Supply Voltage Maximum	60000 V	ShuntVoltageRegulator
Regulated DC Output Voltage	25000 V	LoadCurrent=0mA
UnregulatedSupplyVoltageTypical	36000 V	ShuntVoltageRegulator



SOURCE OPERATING CONDITIONS

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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 · Triode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID TO PLATE	0.03 pF	Capacitances GRID TO PLATE 0.03 pf
GRID TO CATHODE AND HEATER	2.6 pF	Capacitances GRID TO CATHODE AND HEATER 2.6 pf
PLATE TO CATHODE AND HEATER	1 pF	Capacitances PLATE TO CATHODE AND HEATER 1.0 pf

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
LIMITS OF APPLIED VOLTAGE-AC OR DC	0.6 V	Average Characteristics LIMITS OF APPLIED VOLTAGE-AC OR DC 6.3±0.6 VOLTS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HEATER NEGATIVE WITH RESPECT TO CATHODE	450 V	Average Characteristics HEATER NEGATIVE WITH RESPECT TO CATHODE 450 VOLTS

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC PLATE VOLTAGE	27 V	Maximum Ratings DC PLATE VOLTAGE 27.000 VOLTS
UNREGULATED DC SUPPLY VOLTAGE	60 V	Maximum Ratings UNREGULATED DC SUPPLY VOLTAGE 60.000 VOLTS
DC PLATE CURRENT	1.6 V	Maximum Ratings DC PLATE CURRENT 1.6 VOLTS
PLATE DISSIPATION	40 W	Maximum Ratings PLATE DISSIPATION 40 WATTS
GRID-CIRCUIT RESISTANCE	3 Mohm	Maximum Ratings GRID-CIRCUIT RESISTANCE 3 MEGOHMS
DC VOLTAGE	36 V	Maximum Ratings DC VOLTAGE 36.000 VOLTS
EQUIVALENT RESISTANCE	11 Mohm	Maximum Ratings EQUIVALENT RESISTANCE 11 MEGOHMS
EQUIVALENT RESISTANCE	1 ohm	Maximum Ratings EQUIVALENT RESISTANCE 1.000 OHMS
EFFECTIVE GRID-PLATE TRANSCONDUCTANCE	200 μMHOS	Maximum Ratings EFFECTIVE GRID-PLATE TRANSCONDUCTANCE 200 μ MHOS
FOR LOAD CURRENT OF	0 mA	Maximum Ratings FOR LOAD CURRENT OF 0 mA 1.000 μ A
FOR LOAD CURRENT OF	1 mA	Maximum Ratings FOR LOAD CURRENT OF 1 mA 45 μ A
FOR LOAD CURRENT OF	0 mA	Maximum Ratings FOR LOAD CURRENT OF 0 mA 25.000 VOLTS
FOR LOAD CURRENT OF	25 V	Maximum Ratings FOR LOAD CURRENT OF 0 mA 25.000 VOLTS
FOR LOAD CURRENT OF	1 mA	Maximum Ratings FOR LOAD CURRENT OF 1 mA 24.500 VOLTS
FOR LOAD CURRENT OF	24.5 V	Maximum Ratings FOR LOAD CURRENT OF 1 mA 24.500 VOLTS



SOURCE DATA APPENDIX

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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater current ... If	200 mA	—
Capacitance de sortie Cs	1 pF	—
Heater voltage mrereeeerneneVÉ	6.9 V	—
Plate voltage. Lecarsceures Vä	27000 V	—
T'ension d' ahmentatmn non regulee VanN	60000 V	—
Valeur CONTINUE vervrrrrerrocrrnseen	135 V	—
Valeur de crête (1)	440 V	—
Plate current	1.6 mA	—
Dissipation d' anode	40 W	—
Filament négatif par rapport à la cathode-Vfk	450 V	—
Tension de la source non régulée VN	36000 V	—
Résistance équivalente de là source RN	11 MΩ	—
Résistance RI (5 WattS)	220 MΩ	—
Résistance R2 (2watts)	1 MΩ	—
Résistance R3 (1/2 watt)	820 kΩ	—
Tension de référence	200 V	—
Résistance equivalente de la source de reference	1000 Ω	—
Géracasa	0.2 mA/V	—
Pour un courant de charge de	1 MA	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pour un courant de charge nul... urr VS	25000 V	—
Pour un courant de charge de 1 mA VS	24500 V	—



SOURCE OPERATING CONDITIONS

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1971 RCA HB3 Binder 4 of 7

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

1971 RCA HB3 BINDER 4 OF 7

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC) – published value 1	6.3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Voltage (AC or DC) – published value 2	0.6 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Current at 6.3 V – published value 1	6.3	Published datasheet value; multiple values represent separate source-table limits or conditions.
Current at 6.3 V – published value 2	0.2	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid to plate	0.03 pF	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid to cathode and heater	2.6 pF	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 2 -Heater	2	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 5 -Grid	5	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Unregulated DC Supply Voltage	60000 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Dissipation	40	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Voltage	36000 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Equivalent resistance – published value 1	1000	Published datasheet value; multiple values represent separate source-table limits or conditions.
Equivalent resistance – published value 2	11	Published datasheet value; multiple values represent separate source-table limits or conditions.
Effective Grid-Plate Transconductance	200	Published datasheet value; multiple values represent separate source-table limits or conditions.
For load current of 0 mA – published value 1	0 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
For load current of 0 mA – published value 2	1000 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
For load current of 1 mA – published value 1	1 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
For load current of 1 mA – published value 2	45 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
For load current of 0 mA – published value 1	0 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
For load current of 0 mA – published value 2	25000 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
For load current of 1 mA – published value 1	1 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
For load current of 1 mA – published value 2	24500 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-Circuit Resistance	3	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid Voltage (I)	-7 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid Voltage 2 – published value 1	2 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid Voltage 2 – published value 2	2 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid Voltage 2 – published value 3	-40 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid-Voltage Change – published value 1	3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid-Voltage Change – published value 2	9 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Note 1: With do plate voltage of 30000 volts and do plate current	30000 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Note 2: With do plate voltage of 30000 volts and do plate current – published value 1	2 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Note 2: With do plate voltage of 30000 volts and do plate current – published value 2	30000 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Note 3: Difference between grid voltage (1) and grid voltage(2) – published value 1	3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Note 3: Difference between grid voltage (1) and grid voltage(2) – published value 2	1 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Note 3: Difference between grid voltage (1) and grid voltage(2) – published value 3	2 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
The high voltages at which the 6RK4R is operated may be – published value 1	6 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
The high voltages at which the 6RK4R is operated may be – published value 2	6 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Operation of the 66K4B with a plate voltage above approximately	66 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
At maximum plate dissipation the plate of the 6BK48 shows	6 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.

TUBE TINKER

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